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PARTURITION AS A FACTOR IN GYNECOLOGIC PRACTICE.*

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To convince gynecologists that parturition is not only a factor, but the principal factor, in producing morbidity which calls for their interference, no other argument is needed but the statistics of their own practice.

Not having any special statistics at my command, I can not give the percentage of the cases of gynecic practice due directly or indirectly to parturition. They, of course, vary in different communities, as well as in the practice of different gynecologists. From what I can cull from general statistics, and from my own, as well as some statistics kindly furnished me by several gentlemen of large experience, I feel justified in saying that considerably over 50 per cent. of all gynecologic cases can be charged to parturition. The statistics furnished me vary very materially; the lowest are 55 per cent., and the highest 90 per cent., the average being about 66 per cent. The percentage of those working in large general hospitals is much smaller than those having private hospitals. In my own practice, if I eliminate the cases of gonococci infection treated in the general hospital, the percentage of cases following parturition is increased over 20 per cent. In speaking of parturition, I, of course, include the large number resulting from abortions. It would certainly be very interesting, and perhaps startling, to know just what percentage of parturient women become subjects for the gynecologist. This can not even be approximated, nevertheless our observation leads us to believe that it is quite large.

Aside from inversion of the uterus and fistulas due to pressure, nearly all the morbid conditions following parturition which come to the notice of the gynecologist are primarily due to sepsis, to lacerations, or to both combined.

Having these undisputed facts before us, it behooves us to make earnest, energetic inquiry as to: 1, the best means of avoiding these primary causes; and 2, when they do occur, what measures will be the most effective in preventing the secondary morbid conditions which are liable to follow in their train. Modern aseptic and surgical obstetric practice has already done wonders in this direction. I believe the principal object of the chairman and secretary of this Section in placing this subject in the symposium, was to elicit a discussion which would show in no uncertain tones, not only the great work already accomplished along this line, but the immense possibilities it affords. I do not want to show an enthusiasm which facts do not warrant, but I believe a rigid enforcement of the rules of obstetric practice, as laid down by our best teachers and writers of to-day, would eliminate more than 50 per cent. of the gynecic cases resulting from parturition, if we except those resulting from abortion. What other proof do I need to sustain me in this than the records of cases confined in the maternity hospitals, where nowadays a case of septic infection very rarely occurs, and from which hospitals a woman is not allowed to depart with a ruptured perineum unrepaired.

In my enthusiasm in this matter I do not want to be unjust to the general medical profession, by making rash statements. At the risk, therefore, of apparently making an apology for ignorant and careless midwifery, I do not claim that we have arrived at that degree of perfection that we can, in every instance and under all circumstances, prevent septic infection. This concession does not neutralize the assertion that in almost all, if not all, cases of "septic infection," there has been a failure in the technique either by omission or commission. The assertion made by a member of our profession some time ago, that "the obstetrician who has a case of septic infection to occur in his practice is guilty of malpractice," was entirely too radical. Our sense of justice as a profession forbids our endorsing such an extravagant sentiment.

The obstetrician can not always control the general environment of his patient, nor can he be held responsible for her ignorance, carelessness, or obstreperousness. He can not make up for the imperfections of an incapable nurse, neither can he be held accountable for the sometimes dangerous interference of ignorant and superstitious neighbors and friends. This being conceded, and the fact acknowledged that septic infection may occasionally occur in the hands of the most skilful and careful practitioner, it does not militate against our claims for the effectiveness of asepsis, nor is it an excuse for the careless or indolent who fail to carry out its requirements.

There is a false idea among a large portion of the laity that a laceration is always significant of a lack of skill on the part of the attendant. This notion is ratified by that class of accoucheurs who never have a laceration to occur in their practice, and who never have a morbidity or mortality to occur after a confinement attended by them—a class with whom I have no patience. They help bring unmerited odium upon able and conscientious fellow practitioners. I can not speak more kindly of such than to say that their practice is either very limited, or they fail to search for lacerations. It is certainly no disgrace, and ordinarily no reflection, on the ability of the accoucheur, to have a laceration of the cervix or perineum to occur. Of course, complete lacerations of the perineum, though sometimes unavoidable, are comparatively rare; but I

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believe that, even in the practice of the most accomplished obstetricians, at least slight lacerations in primiparæ are the rule rather than the exception.

I am convinced from my observations that men frequently allow a lacerated perineum to pass unannounced, and without repair, because of the fear that a knowledge of it would cause a reflection on their skill. To such I say: "Their reputation is liable to suffer subsequently tenfold more by a failure to attempt a repair." I use the word "attempt" advisedly, for it is not always possible to secure prompt and perfect union. While a woman has no right to chide her attendant for a laceration where he has used ordinary care and skill, she has a right to condemn him if he wilfully leaves her to endure the manifold evils which are liable to result from an unrepaired lacerated perineum. The instances are very rare indeed where he is justified in neglecting an immediate repair of the perineum, and just as rare where he should fail to advise the repair of a lacerated cervix at the earliest possible period after the puerperium.

Notwithstanding all of the excuses or concessions I have already made, it is certainly an undeniable fact, that very many more women are doomed to a life of morbidity than should be, with our present resources. This may, to a certain extent, be the result of incapability or carelessness on the part of the practitioner, but as a rule the skill and honesty of the physician is beyond reproach. Methods of practice and ignorance on the part of the laity are largely responsible. The general notion that the obstetrician is a mere midwife, whose duties begin with the onset of labor, and end with the delivery of the placenta, is preposterous. It is as much his duty to care for her during her pregnancy, and prepare her for the trying ordeal of labor, as it is to conduct her through that important event. Again, it is equally as necessary for him to follow her through the puerperium and to the completion of involution.

Upon a subject now so well understood as asepsis, it is unnecessary for me to go into minutiæ, and yet there are a few points in this connection, to which I wish to call attention. First, the day of antiseptic midwifery is past. Notwithstanding its many defects, it was necessary in the course of evolution to a more perfect technique. To-day we know its principles are not only directly harmful, but a neglect of asepsis, with a dependence upon antiseptics to right wrongs, is not only unscientific, but cruel and murderous. The true antiseptics are the normal and healthy secretions of the body, and especially that greatest of all germicides, the blood. Hence the necessity of due attention to the secretions and to the condition of the blood previous to the onset of labor. In instituting aseptic precautions before labor, the douching of the vagina with antiseptics is not only useless, but harmful in a healthy woman. And in an unhealthy vagina, with pernicious secretions, it is not effective. Where it is necessary at all to cleanse the vagina, it should be scrubbed and prepared as carefully as if one was about to do a vaginal hysterectomy. The normal secretions of the vagina ordinarily make it uninhabitable for septic germs. The normal and safe habitat for them is the vulva, and it should undergo the most careful cleansing possible.

A cause of infection, through putrefaction, is a failure to remove all placental tissue and membranes. For this reason, a careful examination of the placenta should be made on all occasions to determine its complete removal. In this connection, I want, in the most emphatic manner possible, to call attention to a matter of the gravest importance, which I am led to believe does not receive that consideration it deserves by the profession. I refer to the placenta succenturiata and placenta spuria. I am convinced that they not only exist very much more frequently than is generally believed, but that they are frequently the direct cause of sepsis that can not be accounted for. In two autopsies with which I am acquainted, one of them being in one of the most prominent women of our city, a spurious placenta was found. On at least five occasions I have found them.

Comparatively little has been written on this subject, and I hope I have said enough to awaken a spirit of investigation upon it. While I have not time to discuss the matter at length, notwithstanding the very able paper maintaining the other side of the question, read by my worthy friend from Philadelphia, at the Milwaukee meeting in 1894, I am still of the opinion that "the routine practice of administering ergot after the third stage of labor," as set forth in a paper read by me before the Pittsburg South Side Medical Society, and published in the *Therapeutic Gazette* of July 15, 1892, is pernicious, and is frequently the cause of the woman being placed in the gynecologist's chair.

The too early resumption of household cares and duties after labor and before involution is complete is, I think, accountable for many of the malpositions and their concomitant disorders which we encounter. This matter, however, is elucidated in the paper of Dr. Vineberg, and I will not dwell upon it.

Inasmuch as I have performed the duty assigned me of opening the discussion, I shall leave it for others more worthy to discuss it. In conclusion, I have only to say that by a rational midwifery such as I have suggested, with careful asepsis and proper and timely repair of lacerations, salpingitis, ovarian abseess, and endometritis would be less frequent, and prolapsus uteri, vesicocele and rectocele, with all their accompanying phenomena, would be comparatively rare.

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DISCUSSION.

DR. MORCEDAI PRICE, Philadelphia—I wish to endorse the Doctor's method of treatment. He is the only man in this state who has always advocated good obstetrics. I wish to say that nine out of ten cases of puerperal fever referred to me have been caused by the useless, worthless and dangerous use of antiseptics. The condition of the medical men to-day, in regard to obstetrics, is that they have microbes in mind all the time. They need to be washed and cleaned. I have seen temperatures of 103 and 104 from intrauterine irrigation after labor and from the use of the curette. These two things have come to be the fashion in all cases of labor. The mortality and the danger following such procedures is probably the result of at least 50 per cent. of the deaths from puerperal fever. I have in many instances asked the attending physician to discontinue with antiseptics and washings and the result has been all that could be asked for. In one case I was persuaded by an overwhelming majority, in a consultation, to use a douche. They had irrigated the vagina and asked me to irrigate the uterus. I asked them to give a twentieth of a grain of strychnin, but they insisted on my using the douche. As a consequence we spent the night with that woman trying to save her from the effects of the douche. It is the cause of more disastrous results than any other practice.

I endorse the Doctor's paper without hesitation and believe that if the profession will read and adopt the methods recommended by him, the mortality in obstetric cases would be lessened. It is greater to-day than at any other time in the course of my professional career of thirty odd years. The profession must unlearn all the nonsense taught them in the past, and it will take just such papers as that of Dr. Duff to teach them the proper method.

DR. L. H. DUNNING, Indianapolis—I most heartily endorse the paper. Dr. Duff has stated his point foreibly, although not too strongly. I have often seen what he has pointed out, especially the disastrous results following the use of too strong bichlorid douches. I recall a case seen a few days ago, in which the patient had a temperature of 101. The doctor became alarmed, gave a bichlorid douche, which was followed by shock and an almost fatal issue. Withholding the douche, on my advice, resulted in the recovery of the patient.

The point I specially wish to mention, and which is of considerable importance, is the fact that a large percentage of the cases coming into the hands of the gynecologists are the result of parturition. There is one class of cases which comes to use which could readily be prevented, cases of displacement due to subinvolution. We have all been taught that every case of laceration of the perineum should be attended to at once. While we all believe in treating lacerations conservatively, many general practitioners ignore this point. I do not suppose that immediate repair of a laceration of the cervix has always been satisfactory, but I do believe that the case ought to be examined six weeks after the delivery, and if a laceration is found it should be promptly attended to. If allowed to go on it will in many instances result in imperfect involution, displacements, marked congestion of the pelvic organs and chronic invalidism. The care of the woman delivered should not end until the cervix has been attended to and until involution has properly taken place.

DR. JOSEPH PRICE, Philadelphia—The practice of midwifery in private and public differs more or less. The practice in private has degenerated tremendously. We are not as enthusiastic as we were a few years ago. I remember the time when obstetricians entered into all of our discussions with considerable enthusiasm. To-day the reading of an obstetric paper is the excuse for men to leave the session. The professor of obstetrics sits on two stools. Every obstetrician in America seeks an appointment in school to teach obstetrics while he is practicing gynecology. Nothing is more unfortunate for women than the fact that we have no enthusiastic specialists in obstetrics. You can not very well follow the same methods in public which you do in private. Very few households will permit the practice of well-organized and disciplined maternity work. The syringes commonly used in private houses ought never to be used by the obstetrician. Unless the physician has his own syringe he should never use the one hanging behind the bath-tub. That syringe is used by everybody and is sometimes the source of infection of the entire household. While the wife or mother is down-town shopping the maid or cook will surely use it. I have tried to educate my patients to the importance of locking up their syringes just as they do their jewels. In the maternity the vaginal douche, ante-partum or postpartum, is good practice, as these patients are usually much dirtier than private patients, who take better care of themselves.

The indiscriminate use of the curette is little short of being criminal. A woman sometimes develops a little temperature and the doctor thinks he must use the curette. After having done so he is no better off than before and really does not know what he has done it for. Nearly all the cases which I have seen a few days after curettement, still have some pieces of membrane left in the uterus. Dr. Duff fortunately presents such valuable papers at nearly every meeting of our Association, and we owe him a debt of gratitude for pounding away at obstetrics at such an opportune time as the present.

DR. C. A. RITTER, Kansas City—The science and art of obstetrics, implying in its broadest sense the care of woman during gestation, labor and the puerperium, has, until the recent past, been sadly neglected. The numerous papers on the program of this section dealing with gynecologic subjects, the few on obstetric, indicate to some degree the tendency of the medical mind of to-day. More scientific and careful obstetric work means fewer invalids, and lessens the necessity of gynecologic interference. The frequent practice, on the part of the young graduate—unless thoroughly trained in clinical work, and not altogether absent among the older members of the profession—of frequent vaginal examination, and other useless interference during normal labor; the use of the ante-partum and post-partum douche in the absence of pathological conditions; the failure in immediate repair of injuries to the vagina and pelvic floor, are fruitful sources of infection. Hence many mothers endure a mild or more severe attack of sepsis, have an unsatisfactory puerperium, a "bad getting up," and at no distant date, consult the gynecologist for surgical relief. With temperature and increased pulse-rate during the puerperium we should interrogate other organs besides the uterus for source of trouble.

Frequently the thorough evacuation of the contents of the alimentary canal by the free use of saline cathartics will be followed by normal temperature and pulse. I agree with the author in his statement that there is danger of using too strong germicidal remedies about the parturient canal. To be clean, to be aseptic, should be the alpha and omega in the care of the parturient patient.

DR. A. B. MILLER, Syracuse—I regret that I was not present when Dr. Duff read his paper, but from the discussion it seems to me that we are not treating the subject under discussion as we should. For us to deal with the sky parlor in obstetrics, instead of coming down to the real facts, is not going to diminish or decrease the mortality in obstetrics. The fact that everybody uses the syringe is not the source of the infection in cases of obstetrics; the infection is carried usually by the physician in attendance. If he has been attending a pus case, a streptococcus infection, our patient will in all probability be infected and is surely going to die. If we practice bacteriology and recognize that these infections are based on specific poisons, then we shall know of the possibility of our patient's recovering. If we have a staphylococcus infection the larger percentage of cases will recover, but if we have a streptococcus infection the case will in the majority of instances die. Cases of mixed infection will also die. In my practice, instead of resorting to the curette or irrigating the vagina or uterus, I determine as soon as possible the source and kind of infection with which I am dealing. If due to the presence of putrefactive material in the uterus, irrigation and the curette will do good because we are removing the products of infection and we are overcoming the progress of the infection. If we have septicemia, due to a streptococcus infection, the majority of patients will die; and if due to the bacillus coli communis, it is of little consequence.

As to the silver ointment I regret to say that while several cases have come under my care, I have seen but little benefit from its use. It is all important to ascertain the source and kind of infection with which we are dealing. If we have a pus tube from an old infection, that patient is not going to be benefited by the use of the douche or the curette. It requires something more than that.

DR. ALBERT H. TUTTLE, Cambridge, Mass.—If we consider parturition as one of the most important factors in the production of diseases of women, we must study how we should treat cases of parturition so that we will avoid as much as possible the complications which may result. It resolves itself into two stages. The first stage should be the preparation of our patient before the delivery, and we must consider that almost every case of parturition will be attended with the production of lesions of the parturient canal. This will, in many instances, mean large tears, complicating the deeper structures of the pelvis. In other cases there will only be moderate abrasion, but still capable of carrying infection. Consequently, we should prepare a patient for parturition in as careful a manner as we would for an abdominal section or a vaginal hysterectomy; that is an important factor. I know of no obstretician in my immediate vicinity who makes any preparation of his patient more than to use a vaginal douche. Many of them object to that, saying that a douche before delivery interferes with the normal secretions of the vagina and also interferes with delivery itself.

The other consideration is the careful examination and repair of the parts immediately at the close of labor. It is almost an impossibility to find a primipara who goes through labor without more or less of a tear. There may be only a little gash, which appears as nothing, but when we examine the vagina and look in we may find deep lacerations in the vault extending up to the cervix or opening up the subperitoneal

space. Others may start at the cervix and from a similar lesion. These injuries are generally productive of severe infection with adhesions and fixation of the uterus. The infection in other cases may be mild or severe, depending on the character of the germ present. If the infection is due to the streptococcus you are almost sure to lose your patient. There are two things which should be borne in mind, namely, make a careful preparation of your patient beforehand and carefully examine the vagina and uterus after parturition, cleaning out all clots in the uterus and making a complete surgical repair of the injured parts. If the obstetrician is not able to do this himself, he should call in a neighboring physician who can do it.

The complete surgical repair of the injuries of parturition is of the utmost importance for the health of our women and the prevention of severe pelvic disease.

DR. E. G. ZINKE, Cincinnati—I have no doubt that the majority of those present know how to prevent sepsis during and after labor. I do not doubt that the majority of us thoroughly understand when and when not to irrigate, before, during or after labor; when and when not to use the curette, when to use the sharp and when the dull curette. The trouble lies elsewhere and it was pointedly stated by my friend Dr. Price, of Philadelphia. The obstetrician of the present day does not hold the position he should and there is a very good reason for it, because it does not pay to be a specialist of obstetrics. There is not money enough in it to pay a man to devote his attention exclusively to the practice of obstetrics and there lies the fault.

Everybody who has graduated, who has received a course of study as we now have it, thinks he knows all about obstetrics. I have seen men who have told me that they never saw a fatal case. They do not know what it is to have a case of puerperal sepsis or a badly torn perineum. In my part of the country, men attend cases of confinement for from $5 to $20. A man who charges $25 is looked upon as a robber, and the man who charges $50 is left strictly alone.

I hold the chair of obstetrics in our college and I am bound to practice gynecology in order to pay my debts. It is well to look these things in the face. The chair of obstetrics ought to be endowed. A good college ought to pay a man $5000 a year to teach such a branch. Then they could demand of him that he give the subject his entire attention, and I, for my part, would be willing to do it.

The profession, too, is largely to blame, because every effort that men have made, with the view of establishing maternities or out-door clinics have been damned by the profession abroad and in their immediate vicinity. I remember years ago when I started an out-door clinic in Cincinnati. I had great difficulty in obtaining the permission of the faculty to do so for fear the college would receive unpleasant notoriety, and not without good cause. The first obstetric clinic was established in Boston, and the founder of it had to leave the city in order to save his life. The first attempt to deliver a woman before a class was served in the same way. To-day, a man connected with a maternity or out-door clinic is looked down upon by his brethren. If you want to teach obstetrics thoroughly and practice it as it should be, all these things must be taken into consideration. Every man is doing the best he can, and you can not blame him if he practices other things which he understands just as well, and does not limit himself to the department he occupies simply because it does not seem right to some.

DR. DUFF (closing the discussion)—I would like to say much on this subject and would like to have said it in my paper, but I had to make it short, simply striking the notes and giving you the tune. You all know that the subject of obstetrics has not been a popular one. I have found this out for several years. I teach obstetrics and try to do so to the best of my ability, but I have to practice gynecology to make a living. I am sometimes called out fifty miles into the country to help a man out in a case. I lose much time and money in making this call, and when I meet the doctor at the depot he will probably tell me that "this is a poor man and he can not pay anything," and all I get for my time is my expenses paid. A man can not practice obstetrics alone; he can not take the necessary time; he can not have the armamentarium.

As to infection, we are coming to the day when we will consider septic infection as I have discussed it in my paper. The days of aseptic obstetrics are coming. We must use prevention in obstetrics as we do in other operations. We should not be careless beforehand and then try to remedy it afterward. Neither should we invade the territory in order to defend it, when there is no infection present in it.

A short time ago, I saw a case of septicemia in consultation with two other gentlemen. The lady had a temperature of 107, and the pulse I could not count. I made a digital examination and found placental tissue in her uterus. I called the attending physician aside and asked him whether he had all of the placenta. He said "yes" and even exhumed the placenta in order to prove it. On examination, I found that there was a placenta succenturiata as large as my hand. The case I refer to in my paper had sepsis. The doctor said he had taken the pieces all out, but on the autopsy we found a placenta succenturiata. I have seen five cases of this myself, and I have met others who have found them as well. There is very little in the literature on the subject, and I hope it will be considered more carefully next year so that all cases of this kind may be recorded.

I should like to talk along this line for a long time, but I hope that the spirit engendered here this morning will grow, and that the obstetrician will come here, read his paper and become popular instead of being an excuse for a man to slip out of the room.

ANTEFLEXION OF THE UTERUS; ITS CAUSES AND TREATMENT.*

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Anteflexion of the uterus may not infrequently be regarded as a symptom of an undeveloped condition of the genitalia. The state is, no doubt, in many cases, congenital in its manifestation, or is early superinduced by exposure of the subject to faulty hygienic surroundings. Improper modes of dressing during the years of childhood and before puberty have been ascribed as an important factor entering into its causation, but it is often difficult to appreciate how the normal intra-abdominal pressure can be so modified as to cause, to any great extent, before the vulvovaginal introitus has been affected by the influences of parturient processes, displacement of so small an organ as the uterus, which, for the most part scarcely measures by the sound two and one-half inches in depth.

The uterus, including its cervix, sustained in its proper position by the uterosacral ligaments, with the axis of the corpus assuming with that of the cervix an obtuse angle, can not be said to present a condition manifesting pathologic phases, unless there is an accompanying dysmenorrhea or there are marked vesical symptoms. Such a condition of the uterus does not require treatment, unless there has been exhibited a tendency to a greater displacement of the organ, or there is an associated inflammation, or a morbid process in adjacent structures. When the axis of the body of the uterus forms with the axis of the cervix an acute or a right angle, pathologic symptoms, more or less severe, are almost always present.

Cervical anteflexion is largely due to habitual constipation; this is more apt to occur in girls at the beginning of their menstrual period, when the lower portions of the uterosacral ligaments are in a soft and yielding condition. For this reason, treatment for healthful regularity of the bowels in such subjects

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should at as early a date as possible be commenced and persevered in.

Besides the influence of excessive accumulation of fecal matter in the rectum or sigmoid flexure of the colon, frequent and long retention of the urine in the bladder is a most prolific predisposing cause. Girls should be admonished that shorter intervals for micturition are absolutely essential; particularly is it so with those who are compelled to stand much, or to take long rides, or who during the hours of the night take regular sleep after undergoing fatiguing or wearisome exercise. I have been noticing for some years the influences of such factors, and have come to regard them as matters of no small importance. American girls, from sheer modesty or from overindulgence in notions regarding the necessity of complying strictly with what may be termed the morbid conventionalities of society, have too often become the victims of vesical inflammation and distention, which have laid the foundation of cystocele and the more serious forms of anteflexion.

Prolonged mental strain, to which young females are habituated in our public schools and higher educational institutions, tends to render functionless the genitalia, or to deprive those parts of the necessary pabulum for their proper anterior development, by determining the influences of such aliment to the brain or central nervous system for the special display or attainment of cerebral activities.

In the fetus the cervix is earlier developed than is the corpus uteri; so also does the posterior portion of the uterus advance in earlier life faster than the anterior part. This we may often see by noticing the thinness of the anterior portion as compared with the thickness of the posterior aspect of the cervix, or of the lower segment of the body of the uterus.

The cause of this may satisfactorily be found when it is observed that in the females of some of the lower placental mammals the two uteri formed out of the lower portion of the Müllerian ducts remain separate, while in the higher orders of the same group the organs unite and form but one. The process of union, according to Gegenbaur and Haeckel, proceeds continuously and gradually from behind and below, upward and forward.

It may be said, therefore, that conditions which would lead to an imperfect growth of the sexual organs generally would make their influence become more manifest by the effect that would result on those parts, like the anterior segment of the uterus, which are slowest in their formation.

While we do not know as yet why menstruation has become necessary, we have been able to determine that it has been the outcome of the earlier evolutional processes, as its phenomena or its analogue are seen in certain grades of the higher kinds of placental mammalia.

The force of one fact we can fully realize is that whatever functional attainment has come through the long course of ancestral development should not be abruptly interfered with, for the organism has largely accommodated itself to its operations; and its harmonious working according to its own impulse, received through heredity, is almost absolutely essential, for the time being at least, to the preservation of the higher physical and mental activities and to the all-roundness of the individual.

As already intimated, contraction due to inflammation of the anterior wall of the uterus, at or near the junction of the cervix with the corpus, may be a cause of anteflexion; this occurs when the inflammation of the part has been the result of an extension of inflammation from the bladder or other portion of the urinary apparatus.

The weight of a fibroid or other tumor in either wall of the uterus may be accompanied by anteflexion but such a state can hardly be regarded as a typical form of flexure of the organ. If the influence of the pressure, however, produces a concavity of the uterus anteriorly, permanent flexion in that direction may follow as a result of the interference with the nutrition of that part of the uterus.

The formation of peritonitic adhesions anteriorly to the uterus is sometimes undoubtedly the cause of the forward flexion of the organ; this would be especially a factor in those cases in which the uterosacral ligaments are firm and unyielding or have become unduly shortened or contracted from any cause.

Endometritis, alteration of the uricular glands, atrophy of the submucous connective tissue, disordered condition of the vascular element are sometimes prolific sources of anteflexion.

In a case of a young woman aged 19 years, who had marked anteflexion attended with dysmenorrhea, there was a preternatural enlargement of the veins in and about the meatus urinarius. The veins in the anterior vaginal fornix had also become varicose and were much more numerous than was normal.

In many, if not in most, cases of anteflexion of the lesser type, the condition is merely physiologic in its general aspects, while in other forms it results from affections of the appendages, as from salpingitis, ovaritis, or extension of the inflammatory processes to the anterior walls of the uterus. This was exemplified in the case of a young woman aged 17 years, who had received an injury from a fall on the anterior portion of the pelvis; the accident was subsequently followed by the occurrence of dysmenorrhea and a well-marked anteflexion; pain and febrile disturbances lasted some six weeks immediately preceding the flexion.

The influences of degenerative changes in the cervical glands upon the submucous tissue and upon the muscular structures about the os internum are not infrequently productive of atrophy of the adjacent parts. Such a state unfits in large measure the structures for sustaining the corpus uteri; the condition is liable, in unmarried or in childless women, to be followed, through faulty postures which they may repeatedly assume, by the occurrence of a considerable degree of anteflexion. As said before, whatever tends to reduce unduly the general tone of the organism during its formative stage, as the lack of proper diet, may be productive of the flexure. Hyperemia, uterine catarrh and metritis resulting from mental overexcitement, cinædia or sexual perversion will often serve to weaken the uterine tissue and thus become a cause. Attacks of gonorrhea, subinvolution following abortion occurring at an early age of the patient, parametritis and cellulitis are all liable to be productive of softening or relaxation of the uterine parenchyma, and so give rise to the affection. Physical overactivity during the stage of engorgement of the organ, about the time of the occurrence of the menstrual flow, becomes an exciting cause.

It should be again said that cystitis and other morbid conditions occurring at an early age not infrequently become a factor entering into causation. In most cases of anteflexion the connections of the bladder with the uterus are preternaturally high. In childhood the os internum is situated higher in the pelvis than it is in

later years; if, therefore, while the corpus is in a state of growth and development, any factor should have occurred to interfere with the normal length or with the elasticity of the uterosacral connection it will of necessity project forward upon the parietes or fundus of the bladder. Perhaps, in cases of the more serious variety, the wearing of improper dress or heavy skirts may, by modifying the intra-abdominal pressure, act as exciting causes.

Among the other causes of anteflexion which may be mentioned are: venereal excesses after marriage, criminal abortion, prolonged and instrumental labor—this to effect delivery before the full term may result in violence to the bladder or to the vesicouterine ligaments—and the all too prevalent means adopted to prevent conception or to overcome the same during its earliest stages. These influences tend to produce congestion or inflammation of the uterine tissue and contraction or inelasticity of the uterorectosacral ligaments, as before remarked.

As regards treatment, it is necessary to consider carefully in each case the predisposing cause. In a large class of cases the ora will be found preternaturally small or contracted. In such instances rapid dilatation, when faithfully performed, at the proper time, will be of much service. The operation straightens and strengthens the uterus.

In a few cases in which vesical symptoms were the disturbing features, the insertion and wearing of a properly fitting Hodge pessary were found to be of much advantage. Prolonged horizontal posture, the daily use of hot vaginal douches and the free administration of laxatives have been found beneficial as supplementary means for relief.

Marriage and encouragement of pregnancy for effecting a cure have had their advocates. Concerning the wisdom and advisability of such a step, I have some misgivings. A young woman whom I treated some years ago for anteflexion of the third degree received much benefit from the use of a Hodge pessary and of other means which I have mentioned. She was of good family; she had a soft, relaxed tissue generally. Country life and favorable hygienic surroundings added greatly to her comfort and restoration. She subsequently married and had a fair recovery after her first confinement. Her second labor, which occurred a few years after the first, was followed by a fatal attack of puerperal septicemia. After her marriage and removal into the country, during each time of her parturition, she had received skillful treatment, but she was unfitted to endure the strain consequent on her last sickness. I was called in consultation some hours before her death. There was no extensive laceration of the parts, the uterus, though empty, was found soft, relaxed and flabby. The uterine sinuses were choked with small coagula and the vessels beyond contained numerous points of embolic occlusion. Had this woman remained single, instead of exposing herself while possessing such relaxed and delicate tissue, to the risks and exactions of marital relation, she would undoubtedly have been able to have led a life of much credit and honor to herself and of advantage to her community.

For overcoming the hemorrhagic tendency curettement after dilatation of the uterine canal is most helpful. Tampons of iodoform gauze and the application of glycerin and ichthyol are in some cases excellent adjuvants.

In cases in which the active inflammatory processes have been brought under control, the use of Cutter's or Thomas' intrauterine stem pessary will sometimes be found worthy of trial.

My experience in the employment of Sims' discision of the posterior lip and in that of amputation of the cervix is far from being favorable for the indorsement of the practice. Recently there has come under my care a case in which such amputation had been resorted to for anteflexion. The patient presents a condition that may be regarded as anything but pleasant to contemplate. The corpus has become dilated and globular. The inner os appears as a mere fistula, which closes at intervals, and thus causes retention of fluids; when the os opens spontaneously or is dilated artificially the condition of the uterus resulting markedly interferes with the intra-abdominal pressure. In some cases, after rapid dilatation and curettement, I have found that gradual straightening of the canal by use of the sound or sterilized bougies proves of much benefit. Rapid dilatation, performed so as to straighten and shorten or broaden the uterine canal, followed at the time by thorough curettement, will frequently afford much relief. This should be supplemented by the frequent employment of gradual dilatation and by the patient's wearing at intervals between the menstrual periods a stem pessary. In those cases in which the ovaries and tubes have become adherent about the uterosacral ligaments, these should be separated, if possible, after all active inflammatory processes of the endometrium and other parts have been overcome, by resort to bimanual rectovaginal manipulation, and by the free use of tampons saturated with ichthyol and glycerin. In those cases in which cystitis has been a prominent symptom, from position or weight of the uterus, the use of a properly fitting pessary, after the acute stages have yielded, will become an essential means of relief.

A FEW OBSERVATIONS ON THE EFFICACY OF PROTARGOL IN PYOGENIC AFFECTIONS OF THE EYE.*

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CHICAGO.

Neisser, who was the first to test the germicidal activity of this new silver salt, found that a solution of 1:2000 prevented the growth of bacteria, while silver nitrate stopped their growth in a solution of 1:5000; but while the latter showed the greater germicidal power in the test-tube, protargol showed a greater penetrating power in the tissues, since it was not precipitated by blood-serum and other fluids containing albuminous compounds. Numerous clinical observations have fully confirmed the germicidal activity of protargol. I will refer only to the reports of Darier, one of the first and warmest advocates of this new remedy, who submitted a very interesting summary of his results to the last International Ophthalmological Congress in Utrecht.

Clinical experience, however, has not only proved protargol to be as efficient as argentic nitrate in the treatment of pyogenic affections, but has discovered in it valuable properties not possessed by silver nitrate. All observers agree that protargol, even in strong solutions, causes but very little irritation, and has no caustic effect. This is an advantage of inestimable value, because it permits its free use under conditions where the application of silver nitrate, on account of its irritating and caustic effect, is either positively forbidden or admissible only under the greatest precautions. We all know, for

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instance, how cautious we have to be in the use of argentic nitrate in the first days of an acute gonorrheal conjunctivitis; how disastrously its application may operate if one neglects to protect the cornea against contact with the solution. How different with protargol! Whatever the strength of the solution it does no harm to the cornea and therefore may be applied boldly and without fear of letting it come in contact with any part of the eye. Let me illustrate:

March 24 a woman 44 years old consulted me about an inflammation of her right eye, which had begun two days before and had all the ear-marks of a violent acute gonorrheal conjunctivitis: great swelling, redness, and tenderness of the lids, so that the eversion of the upper lid was very difficult and painful; chemosis of the ocular conjunctiva, croupous coating over the tarsal conjunctiva, and a copious discharge of a whey-like secretion containing numerous gonococci. Now, in this early stage of gonorrheal conjunctivitis we religiously abstain from the use of nitrate of silver; but I did not hesitate to apply protargol at once. A cotton swab well charged with the solution—20 per cent.—was passed under the upper lid well up to the fornix and rubbed back and forth over the conjunctiva. In the same way the lower cul-de-sac was treated, and during these manipulations the protargol spread quite freely all over the eyeball. Thirty minutes after the treatment the lids were noticeably paler and less swollen, and the patient experienced a sensation of great relief. The application was repeated in the evening and twice on the following day. March 26 the lid-swelling and chemosis had disappeared; the tarsal conjunctiva was free from fibrinous coating, and the secretion showed a mucopurulent character, still containing gonococci but in much smaller number. From this day on the 20 per cent. solution was applied only in the morning and a 5 per cent. solution instilled by the patient's nurse in the afternoon and evening. On March 31, the discharge was very scanty and free from cocci; and on April 7 it was recorded that the last four days there had been no discharge. Thus in less than two weeks the eye had recovered from a violent gonorrheal infection.

With equal success protargol asserted its germicidal power in a number of suppurative inflammations of the tear-sac. A few injections usually were sufficient to stop the purulent secretion. One of the most striking instances was the case of an Irishman, 52 years old, with an acute suppurative inflammation of the tear-sac of three weeks' duration. The left side of his face was made hideous by the redness and enormous swelling of the lids and cheek, and by a large ragged wound over the tear-sac, from which pus was freely oozing. Protargol was injected into the sac, and also thoroughly rubbed with a cotton swab over the walls of the fistulous canal. In three days the swelling of the face and lids had disappeared and the pus discharge had ceased, and healthy granulations covered the wound.

In suppurative keratitis protargol has done excellent service. I unhesitatingly place it at par with the electro-cautery; and while the latter requires a special apparatus not always at the disposal of every physician, and special skill and judgment in its use, the application of protargol requires no special precaution and may be made by a nurse or almost anybody after being shown how to do it. When physicians are once acquainted with this remedy I believe many eyes will be saved which now are lost because the patient can not get the services of a specialist.

This opinion is based upon the experience in a dozen cases treated during last winter. In all cases the suppuration was checked promptly, and if the destruction of the cornea had not gone too far before I saw the case, the eye recovered with a small leucoma. In two cases the whole cornea was already involved, and, of course, could not be saved, though even here the protargol effectually stopped the further progress of destruction. The following two cases may serve as illustrations:

CASE 1.—Railroad laborer, 32 years old, left eye struck by piece of coal November 15, admitted to the Presbyterian Hospital, November 22, in this condition: Swollen lids, marked chemosis, mucopurulent discharge, central portion of cornea cloudy and enclosed in a ring of pus infiltration, and a small hypopyon. Protargol was applied to the cornea as well as to the retrotarsal folds, and atropin instilled.

November 23, lid swelling and discharge greatly diminished; pus ring in cornea less marked. November 24, lid swelling and chemosis gone, no more discharge; in place of the ring there was a clean shallow groove. December 4, patient left the hospital with a rather slight central opacity in the cornea.

CASE 2.—A physician came to me December 23, with a central ulcer in the cornea of his left eye; margin infiltrated, surrounding cornea cloudy; small hypopyon, irregular pupil, several posterior synechiæ. Inflammation began three weeks before, and had been treated chiefly with atropin and hot fomentations. Protargol was thorougly applied to the ulcer. December 24, patient free from pain; slept the first time in three weeks without opiates. December 26, ulcer clean; hypopyon gone. January 6, ulcer healed.

It will be of especial interest to the members of this Section to learn that protargol was found equally efficacious in pyogenic infections after operations. In two cases of normal extraction with iridectomy the wound was not yet closed at the end of the first week. On the eighth day the eyes suddenly presented a great swelling of the lids and chemosis, mucous secretion, infiltration of the wound edges, cloudy cornea and severe pain. In both cases the first effect of the application of protargol was the almost instantaneous alleviation of the pain and the marked decrease of the lid swelling, chemosis and discharge. In the one case the suppuration did not spread beyond the wound edges after treatment was begun, and in two weeks the eye had recovered. In the other patient the symptoms were as violent as in beginning panophthalmitis, and I believe I owe it to the protargol that this eye was saved at all, though with much loss of corneal tissue and occlusion of the pupil.

Six weeks later I again had a case in which the wound was still partly open on the sixth day after extraction. With the experience of the two cases of late infection still fresh in my mind, I was naturally very anxious to see the wound closed and to forestall infection. I, therefore, touched it thoroughly with protargol, which I was satisfied would disinfect without irritating. Two days later the wound was sealed up, the anterior chamber restored, and the healing proceeded in a satisfactory way.

In summing up my experience I may say that protargol is undoubtedly a very valuable remedy in the treatment of pyogenic affections, but the results are largely governed by the strength of the solution and the frequency and mode of application. During the acute period of pyogenic inflammation the solution should be not less than 20 per cent., and applied at

least twice in twenty-four hours; if no decided improvement is noticed, either the strength of the solution or the frequency of application should be increased. It is very essential that the protargol be brought in thorough contact with the affected tissues, and this is, I believe, best accomplished by means of a cotton swab, well saturated with the solution, firmly rubbed over the affected portion of the cornea and conjunctiva, especially the retrotarsal folds. On account of its non-irritating and non-caustic action it is unnecessary to wash the eyes with salt solution or to apply cold compresses after the treatment; nor is it necessary to evert the lids for the treatment of the tarsal and retrotarsal conjunctiva, an advantage greatly appreciated by patient and physician if the lids are much swollen and the eyes very sensitive.

DISCUSSION.

DR. L. WEBSTER FOX, Philadelphia—In 1898 I first used protargol in a mild form of purulent ophthalmia and the result obtained led me to believe that at last we had obtained a remedy which would rob many of the catarrhal inflammations of their dreaded sequelæ.

The patient was infected from a discharge, which, while gonorrheal in character and showing a few gonococci under the microscope, was yet not as inflammatory in character as is usually the case. I also used protargol in two cases of ophthalmia neonatorum and made careful observations of the same, and obtained good results. In granular conjunctivitis, I used the stronger 10 to 20 per cent., and while it seemed to lessen the discharge, yet the granulations were not changed in caliber. In serpiginous ulcers of the cornea, I did not get as good results as I expected; ordinary ulcers of the cornea did not show any greater response to its curative properties than to nitrate of silver. In dacryocystitis, I used it frequently, and it seemed in such cases to be of especial value, stopping the secretions, but not curing them. Its use gives no pain; only a slight burning is felt for a few minutes after its application, which makes it valuable where one is compelled to use it on children.

What led to my investigating its germicidal properties was the claim made for it that it had more penetrative power than the other silver salts, and therefore was of greater value in blenorrheal cases.

My assistant, Dr. Rivas, made some experiments in the pathological laboratory of the Medico-Chirurgical College, January 1899, and his report is as follows:

Transfer.	5 per cent.	10 per cent.	25 per cent.
Immediate.	300 colonies.	No growth.	No growth.
5 minutes.	Many colonies.	17 molds.	No growth.
15 minutes.	124 colonies.	No growth.	No growth.
30 minutes.	21 colonies.	No growth.	11 molds.
60 minutes.	2 colonies.	No growth.	No growth.

50 per cent., no growth.

Control, too many colonies to count.

The following experiments were made by Dr. W. Wayne Babcock:

1. *Method.*—A portion from an old agar-agar culture of bacillus anthracis was mixed in a 10 per cent. aqueous protargol solution, and after 1, 5 and 10 minutes, loopfuls of the mixture were introduced into melted agar-agar, pleated out in dishes and placed in the incubator (37 C.) for about 48 hours.

Per cent. protargol.	Time of exposure.	Number of colonies.
10 per cent.	1 minute.	22 (chiefly minute.)
10 per cent.	5 minutes.	6 (chiefly minute.)
10 per cent.	10 minutes.	None.

Control made on agar-agar slant showed luxuriant growth after twenty-four hours' incubation.

Several drops of 5 per cent. protargol solution in which anthrax bacilli had been introduced 85 minutes before were spread upon an agar-agar slant and incubated about 48 hours without apparent growth.

These experiments indicate that protargol in 10 per cent. solution has a distinct germicidal effect upon anthrax bacilli and their resistent spores after ten minutes' exposure.

2. Similar experiments with bacilli of diphtheria. There was no growth after 1 minute exposure to 10 per cent. protargol solution; but these experiments are rejected from lack of satisfactory control.

The remaining experiments were all conducted after the method suggested by D. W. Hill. (Public Health Reports, xxiv.) The method is to smear the lower end of a sterile rod with a thin coating of a pure culture of the micro-organism.

After permitting the bacterial coating to spontaneously dry it is introduced for a measured time in the antiseptic solution, washed in sterile broth to remove the excess of the antiseptic and finally incubated in a tube of sterile broth for two days at about 37 C.

3. Virulent anthrax.—Agar-agar slant culture, 24 hours old smeared upon the ends of glass rods.

Protargol.	Time of exposure.	Growth.
1 per cent.	½ minute.	+
1 per cent.	1 minute.	+
1 per cent.	2 minutes.	Sterile.
5 per cent.	½ minute.	+
5 per cent.	2 minutes.	Sterile.

Control, growth.

A tube for washing after exposure to 1 per cent. protargol solution showed a growth.

4. Similar experiments with 48-hours anthrax culture—agar-agar slant.

Protargol.	Time of exposure.	Growth.
1 per cent.	1 minute.	+
1 per cent.	3 minutes.	+
1 per cent.	5 minutes.	+
1 per cent.	5 minutes.	+
1 per cent.	10 minutes.	+

Control, +.

Broth used for washing the antiseptic solution from rods.

Per cent.	Time.	Growth.
1	1 minute.	+
1	3 minutes.	—Sterile.
1	5 minutes.	—
1	10 minutes.	—

It is to be expcted that the 48-hours culture would show greater resistance from the presence of many spores.

5. Bacillus typhosus.—Rods smeared from slant culture upon agar-agar:

Per cent.	Time of exposure.	Growth.
1	½ minute	+
1	1 minute	+
1	5 minutes	+
5	5 minutes	Sterile.

Control, growth, wash broth; no growth.

6. Staphylococcus aureus from slant culture upon agar-agar smeared upon glass rods. Incubated in broth about 48 hours.

Per cent.	Exposure.	Growth.
1	2 minutes.	+
1	5 minutes.	—Sterile.
1	5 minutes.	+
1	10 minutes.	+
5	½ minute.	+
5	2 minutes.	+
5	5 minutes.	+
5	5 minutes.	Sterile.

Wash broth remains sterile.

The discrepancies in the results of the experiments with staphylococci suggested that protargol solutions might be lacking in penetrative power and thus unable to rapidly sterilize the deeper layers of the thicker smears. Further experiments were undertaken to determine this point, but have not as yet given results that warrant report.

7. Diphtheric broth-cultures smeared upon glass rods.—As the particles of diphtheric cultures are readily washed from the glass rods it is thought that these results are more liable to error than the previous ones.

Per cent.	Exposure.	Growth.
1	½ minute.	Sterile.
1	5 minutes.	Sterile.
5	½ minute.	Sterile.

Control, +; wash broth, sterile.

DR. G. E. DE SCHWEINITZ, Philadelphia—I have listened with the greatest interest to Dr. Hotz's enthusiastic endorsement

and to Dr. Fox's equally enthusiastic remarks. I have used protargol a great deal within the last few months and have been very much impressed with its uncertainty. I have seen it do just such marvelous things as Dr. Hotz described and have seen it just as ignominously fail, so I have begun to feel that perhaps we have been too enthusiastic over this new silver salt. My own experience is that protargol is far more agreeable, of course, than nitrate of silver, but can do nothing that the nitrate will not do and the latter frequently does many things that protargol will not do. I have not used it quite as strong as Dr. Hotz recommends, but used it in the same way. I began with a 10 per cent. solution and have gone as high has a 15 per cent solution.

In one particular my experience corresponds with Dr. Holtz's, and that is that when a croupous membrane forms and nitrate of silver would do harm, protargol does not; but I regret to say also I have not seen it do good in such cases. I have great respect for the remedy and use it daily, but it is uncertain.

DR. CASEY A. WOOD, Chicago—The reason that I suggested that this remedy should be taken up for discussion this year, was because I think I was one of the first to use it in the part of the country where I live and I have found that I am not able to get those universally good results from it that men elsewhere have been reporting. My experience has been very much the same as that of Dr. de Schweinitz, and I was afraid that I should be the only one here to sound a discordant note in the chorus of praise that has been raised. I think perhaps we have been using nitrate of silver in many cases where it has done harm and where possibly cleansing and the use of mild remedies would have brought about a cure in any event. I must say that in some cases of corneal ulcer where massage was used with it, it brought about fairly good results, but I am not able to bring myself to think it is better than nitrate of silver and some other agents which we have known for a good while.

DR. T. Y. SUTPHEN, Newark, N. J.—I have recently seen a case of sloughing ulcer of the cornea. This tissue was extensively infiltrated, while the anterior chamber was nearly full of pus. In this case I felt sure the man would lose his vision. To my delight the trouble began to mend directly after beginning the use of protargol in conjunction with hot water. I attribute the benefit in a great measure to the drug. Argonin I prefer in purulent conjunctivitis. With these remedies I have lost many of my fears concerning a favorable result in severe corneal and conjunctival cases.

DR. C. F. CLARK, Columbus—I want to agree with Drs. Wood and de Schweinitz in their judgment of protargol, for my experience has been quite similar. Excellent results have been obtained in dacryocystitis. It has failed so utterly in other cases where it should have done good that I at first thought I had not a fair sample of the drug, but at the same time another case of keratitis treated from the same sample would do well. I have had better results with antinosine in similar cases.

DR. FRANK C. TODD, Minneapolis—I would like to ask Dr. Hotz if this drug has been used for the prevention of ophthalmia neonatorum as we use nitrate of silver, and if so in what strength?

DR. EDWARD JACKSON, Denver—I have used protargol a good deal and on the whole I think I would rank it as highly as the solution of nitrate of silver. As a last resort or final dependance I would prefer the nitrate; but the protargol seems so much more generally applicable to a large number of cases that I think on the whole it is probably quite as useful. For the great mass of cases it is certainly very much less irritant than the silver nitrate. But I arose principally to mention the exceptions. I had used it many months without meeting with an exception when I came across a case of dacryocystitis in which I injected it into the sac, after having given the patient a 5 per cent. solution. There was free drainage at the time. The patient complained very bitterly of the suffering it caused, and on subsequent trials this was renewed. He even preferred the passage of a large Theobold probe to the use of protargol. The eyes the next day showed an amount of redness and general irritability that they had not shown at all previously. Even a 1 per cent. solution produced this condition. Since then I have met another patient who made the same complaint on its application. It must be rare to meet with such cases, but they must be looked out for.

DR. F. W. SOUTHARD, San Francisco—I desire to give my testimony in favor of protargol. I have used it for nearly two years in my clinic and have come to place great reliance upon it. I believe, however, that the method of using it is of importance. The eye-ball and the ocular surface of the lids should be thoroughly but gently irrigated with bichlorid solution, 1-8000 or formalin .25 per cent. before applying the drug. It is true I have had failures, but on the whole I feel that it is a most useful drug and shall for that reason continue its use unless I find that my cases do not do as well as by the older methods.

DR. FRANK ALLPORT, Chicago—My experience with protargol has been variable. In view of its enthusiastic endorsement by reputable observers from all parts of the world, I commenced its use with full faith as to its efficacy. I saw many speedy and favorable results, but I also encountered some failures. I do not regard it as highly now as I did at first. It certainly possesses some advantages over nitrate of silver, which have been thoroughly described by the gentlemen who have preceded me; but I have had cases like those mentioned by Dr. Jackson, where even a weak solution produced considerable pain, notwithstanding the fact of its recommendation as a painless application. I remember one case where an injection of a 10 per cent. solution into the lachrymal sac practically disabled the patient all day. I have used as high as a 50 per cent. solution occasionally, and a 25 per cent. solution frequently, but it seems to me that I obtain about as good results with a 2 or a 5 per cent. solution as from the stronger ones. I think the principal point in favor of protargol is its easy application, and the freedom with which one may use it; but I can hardly say that I have seen cases where it has accomplished results superior to what might have been accomplished by the old nitrate of silver properly applied, unless it may be in apparent affections of the lachrymal sac, where it appears to possess especial beneficial qualities. In using protargol I evert the lid and cleanse it with sterile water and cotton, and believe that this procedure materially enhances its value. Another point which makes protargol a remedy of great service to ophthalmologists is the fact that it can be freely given to patients to use at home, which surely is in striking contrast with nitrate of silver.

DR. LEARTUS CONNOR, Detroit—If the reports of scientific investigations respecting the germicidal powers of this drug be correct, under the same conditions its application should produce the same results with a preparation that is equally reliable. Now, I suspect that they are correct and I have no reason to doubt it, but there is reason to doubt whether different samples of the drug are of equal value, otherwise I can not understand why for two and a half years I should have failed to accomplish under the same conditions the same results the other gentlemen have. Of course it is not to be supposed that this agent if applied with mucus over the surface will always penetrate through that and be adequate to kill the germs beneath it, and so its application must be made with care, but as to the strength of the solution, for myself, I think it doesn't matter except that if you use a weak solution you must use more of it, in other words there must be enough of the powder to carry the charge and there must be enough of the germicide to kill the germs. I was led to use this drug through the recommendation of an ophthalmologic friend, in whom I have a great deal of confidence, some three years ago. He told me his results and having enough confidence in him to repeat his observations I found he was quite correct. A year and a half later I met him again and asked if he were using it still and he said, "No, it is no good." I said, "Now that is funny, I have done just as you told me and with just the results you told me, and it has been the delight of my life," for I have to treat a large number of cases of purulent ophthalmia in the children's hospital and they used to be a source of very great anxiety, while with this agent not a single eye has been lost. In the gonorrheal cases in the adult my experience has corresponded exactly with that of Dr. Hotz. I do not approach these cases with the fear and trembling I used

to with the nitrate of silver, but I think this should be borne in mind, that the constant cleanliness which we should always employ is just as necessary with this drug as with the nitrate of silver.

DR. A. D. MCCONACHIE, Baltimore—I would like to ask Dr. Hotz if he has had any experience with the use of protargol in acute trachoma. The reason I ask it is because of some experience of my own. I contracted an acute trachoma in one eye, probably in dispensary work at the hospital. Nitrate of silver was used and showed marked improvement for one day, with a relapse the next, and this condition went on with intermissions for a week, and then protargol was used. I can testify to its non-irritating properties, as it was simply no worse than boracic acid or cocain drops, but it did not produce an arrest of the discharge. Prior to that time I had used it a good deal in hospital practice, and I remember one case distinctly of double purulent ophthalmia where the gonococcus of Neisser was found, in which I used in one eye the protargol solution and in the other simple mechanical sterilization with the ordinary plasmin solution thoroughly applied every hour. One eye got well quite as quickly as the other. That may be coincidence, but we continued to use it at the hospital and my confrères there, as well as myself, returned to the use of the old stand-by, nitrate of silver. Time and again we have had to give up the use of protargol and go back to the nitrate of silver.

DR. ALBERT E. BULSON, Jr., Fort Wayne—With reference to the use of protargol in the treatment of trachoma I wish to say that my experience has been on the whole satisfactory. In an epidemic of acute trachoma occurring in one of our orphan asylums I found protargol produced less discomfort than applications of silver nitrate and many times proved just as efficient. In some instances, however, the protargol applications did not seem to produce good results, and the substitution of silver nitrate was followed by improvement. The protargol was first used in 20 per cent. solution, but I soon found that in the majority of instances a 30 per cent. solution proved most efficacious. I never saw any unfavorable action on the cornea. In the treatment of ophthalmia neonatorum I have the utmost faith in the daily applications of 20 per cent. solution of protargol and prefer this treatment to any other. To my mind protargol certainly has a distinct therapeutic value, and in the majority of instances can be substituted for the more active and irritating nitrate of silver.

DR. E. E. HOLT, Portland, Me.—About a year ago I had some bad cases of purulent conjunctivitis that had been treated by good men, using nitrate of silver. It occurred to me in continuing the treatment usually carried out in such cases, that these eyes were going to be blind, if not helped at once, and I began to douche the eyes with the Davidson syringe, leaving off all local treatment, except to keep the water flowing in the cul-de-sac night and day. In one case where the swelling was so great that I expected to do a canthotomy the next morning, I found, however, after the douching over night that the swelling was very much reduced, and the eyes went on to a complete recovery without the application of any drug. I noticed that all the gentlemen prefaced their remarks on the use of protargol by stating the need of absolute cleanliness, and Dr. McConachie's case shows this is quite as effective as any remedies used. I think a complete continuous washing out of the conjunctival cul-de-sac will give good results. I have never lost a case since I began this treatment.

DR. G. L. HIERS, Savannah—I wish to add my testimony to what has already been said in favor of protargol. I have been using it quite freely for eighteen months past and with excellent results. I make it a point, as several of the gentlemen have emphasized, to insist upon absolute cleanliness and I give my patient a weak solution, about 5 per cent. to instill into the eye every three hours. I see the patient once or twice a day, as may be indicated, and make application of a 10 to 15 per cent. solution and follow it with the use of the ice compress. So far my results have been phenomenally good.

In dacryocystitis my experience has been limited, but results were good. In trachoma I never fail to write for protargol and in chronic cases I first squeeze them with Knapp's roller forceps and then use protargol. I have had excellent results.

DR. HOTZ—Let me first answer the questions. I was asked: What is my experience with protargol in acute trachoma? I have not used it? As to the question whether it has been used as a preventive in lying-in-hospitals I think it has recently been tried in lieu of argentum nitrate.

Now, Mr. Chairman, I took it for granted that before treating an eye, or rather before making an application to the conjunctiva of an eye showing a purulent discharge, the lids would be cleansed; and it never occurred to me that the remark in my paper where I said the eye did not need to be washed out, would be interpreted to mean that I did not clean the eye before making an application; but it seems it was so understood by several of the speakers, as they laid particular stress upon the necessity of cleansing the eyes before treatment. My remark had reference to the washing out of the eye after the application of protargol. As you know we use water or salt water, to precipitate the superfluous nitrate of silver after its use on the conjunctiva. If the gentlemen who have spoken of treating these cases by simply observing absolute cleanliness say that they instruct the nurse to insert the nozzle of the syringe under the lids and believe that they will accomplish absolute cleansing of the eyes, they are mistaken. I have never seen an eye which did not show a good deal of mucopurulent material under the lids when they were everted after such irrigation. Some cases we know get well without treatment and others do not, but because a case gets well by doing nothing I do not think it proves that when an application is made in another case, that application is of no value. Now I have not presented this paper because nitrate of silver is not a good and excellent remedy. I have always used and recommended it; but if, as all the gentlemen admit, this new remedy is equally efficient and more pleasant to the patient I do not see why we should adhere to an old remedy and not give the patient the benefit of the more agreeable treatment. I wish to say also that the observations in my paper do not represent my whole clinical experience with this remedy. When I began to use it two years ago I at first had poor results and hence did not start in as an enthusiast for protargol; but my observations lead to the conclusion that I could attribute my failures in the first place to the use of too mild solutions. In using nitrate of silver we consider a 5 per cent. solution very strong, and so I began with a 5 per cent. solution of protargol, which did not accomplish any good. I then tried stronger solutions but did not see any prompt and positive results, until I used 20 per cent. I can only repeat that by starting with a 20 per cent. solution at once and using it in such a way that it comes in close and thorough contact with the affected parts you will accomplish as much good as with the nitrate of silver, and as the application of protargol is not attended by the severe pain and the violent irritation usually caused by argentum nitrate, I am sure we have good and sufficient reasons to substitute protargol for the same.

A SIMPLE OPERATION FOR DIVERGENT STRABISMUS.*

L. WEBSTER FOX, A.M., M.D.
PHILADELPHIA.

All ophthalmic surgeons have been more or less disappointed in the results obtained from the various operations now in vogue for this deformity. The fact that so many operations have been devised for its correction speaks for the failure of the various methods. Having had unusual opportunities for putting the accepted methods to a test and noting the difficulties and many failures ordinarily experienced, I have for the last eight years followed a method which has been more uniformly successful in my hands than any other.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

V.3
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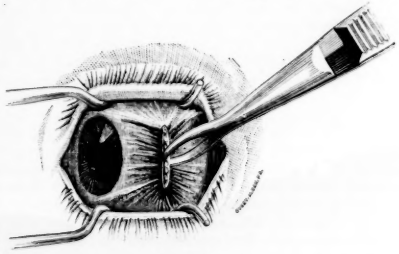
I shall not attempt to describe the various operations which might be called the standard methods; that would be too tedious to a body of gentlemen who have had such varied experiences as the majority of the members. This operation, which has given me such good results, has been developed on lines laid down by De Wecker, Grandclement and Panas. It appeals to me as being much simpler than either of the above. It is in cases where the deviation is five millimeters and upward that this operation is best adapted.

The operation is divided into three parts and is performed under cocain: 1, tenotomy of both external

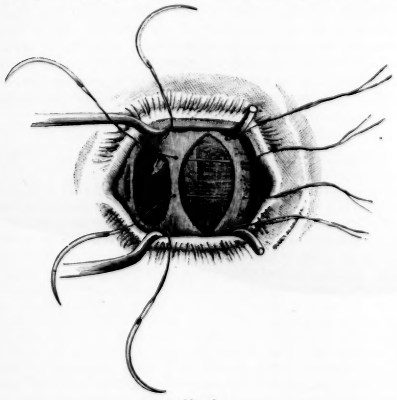


No. 1.

recti muscles and stretching of conjunctiva and Tenon's capsule; 2, making the elliptic opening either on one eye or both; 3, suturing this opening.

The details of the operation are carried out as follows:

1. Tenotomy of both external recti muscles, making an opening through the conjunctiva, over the insertion of the tendons. I then stretch Tenon's capsule until the cornea is well into the inner canthus—this is done on both eyes. Panas' method is to insert the hook under the

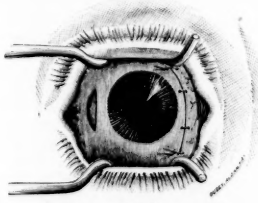


No. 2.

muscle and apply pronounced traction, at the same time burying the cornea in the outer or inner canthus. The operation is performed under ether or chloroform, while in this method cocain is only used. The stretching of Tenon's capsule is an important part of the operation. My method is as follows: The strabismus hook, which is a large one, flat on its side, is inserted in the opened conjunctiva and Tenon's capsule and with considerable traction all the tissues are stretched inward until the cornea is buried in the inner canthus. The stretching of the upper tissue has, as can be readily understood, a tendency to rotate the eyeball to a certain degree and leave the conjunctiva and Tenon's capsule intact below; to equalize the stretching, the point of the hook is reversed, and the lower conjunctiva and capsule stretched. In Panas' method the hook being placed under the external or internal muscle prevents rotation of the eyeball.

2. With the retractor forceps I grasp the conjunctiva vertically, midway between the cornea and caruncle and directly over the internal muscle, and draw upward the conjunctiva and as much of Tenon's capsule as I can. I raise the forceps two or three times to take up as much of the redundant tissue as my judgment dictates, and by this means one apparently is always successful in separating conjunctiva and overlying tissue from the muscle, if it be still present; then with curved scissors I cut with one long sweep the upraised conjunctiva and capsule close to the eyeball, making an elliptic opening, exposing, at times, the attenuated muscle, and, if no muscle be present, then the clear sclerotic.

This opening now extends in a vertical direction, beginning below the lower level of the cornea to a point above the same, its width over the muscle is about one



No. 3.

full centimeter at its greatest diameter. The conjunctiva is then separated around this elliptic wound from its subconjunctival tissues at all points, even around the cornea if possible.

3. The elliptic opening is brought together with four sutures; the upper suture is inserted through conjunctiva and Tenon's capsule and across under conjunctiva and Tenon's capsule midway between the insertion of the superior rectus muscle and the margin of the cornea; a similar suture is passed through the lower margin of the conjunctiva and brought out midway between the insertion of the inferior muscle and the margin of the cornea; this thread is then tied and in like manner the upper thread; two more sutures are passed through the margin of the lips of the wound and united.

This constitutes the details of the operation. The object of the operator should be to produce one to four millimeters of convergence, which disappears during cicatrization. When the defect is not more than two or three millimeters I have performed an external tenotomy on both and stretched Tenon's capsule, with excellent results, without taking out the elliptic section, especially in those cases where the eyes could be held by the patient at fixed convergence at ten inches.

While this operation is similar in many details to that of De Wecker, Knapp, Snellen, Gruening and Grandclement, yet I am sure its simplicity has much to commend it, and the results obtained in my hands make it

preferable to any single one of the above-mentioned methods.

NOTE.—I refer the reader to Dr. St. John Roosa's article in *The Postgraduate*, November, 1899.

1304 Walnut Street.

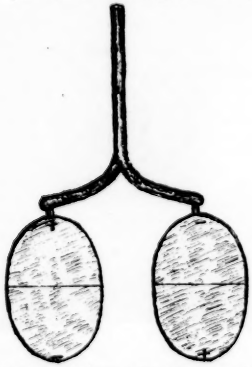
HOW TO PLACE LENSES BEFORE THE EYES SO THAT DISTANCE OF THEIR RESPECTIVE ANTERIOR FOCI SHALL BE THE SAME.*

MARK D. STEVENSON, M.D.
AKRON, OHIO.

Not every ophthalmologist seems to realize the extreme importance of having the anterior focus of each eye at exactly the same distance, and many who try to obtain this fail because of the improper methods used.

If the anterior focal points are not exactly at the same place the ciliary muscles in their ceaseless efforts to find a position of rest will be under a constant see-saw. Every ophthalmologist finds cases in which comfort and good vision can be obtained for each eye separately, yet when the patient looks with both eyes, he complains of discomfort and dizziness and of not being able to see clearly. The problem is how to remedy this.

Many patients with glasses have the same visual acuity in each eye. After refracting such cases, and while



they view distant test-types with both eyes, I take a plus and minus sphere of .25 diopter strength and place one before each eye, wait a few moments, when I quickly interchange them. If the patient has any choice it shows me that I must raise the correction of one or lower that of the other, or do both.

If, however, the acuity of vision of one eye is the slightest amount better that that of the other, I take the same lenses, and, placing first one and then the other before the same eye, find which is better, and repeat the same process before the other eye. If a change is needed, the patient will accept a plus before one eye and a minus before the other; this method also indicates in what manner to proceed.

For the sake of convenience, I have combined four lenses, as shown in accompanying diagram. In the first test I hold the two lower lenses in front of the eyes a few moments, and then quickly lower the upper two into position.

In the second test, and in fitting for near, I use one side of the combination, putting first one and then the other before the same eye. It is not to be forgotten, in making the last test if the eyes are not completely under the effect of a cycloplegic, the patient will often choose a minus glass for both eyes, because there is a tendency to accommodate.

In all cases, after having finished these tests, always try stronger convex or weaker concave glasses of the same amount on both eyes.

In presbyopia the amount to be added to the refraction for distance may differ in the two eyes on account of differences in the progress of sclerosis of the lenses and the consequent changes in the ciliary muscles. The common method of fitting presbyopia is to add the same amount to the distant refraction of each eye, and to decide if the desired location of the near test-type is the same for each eye separately. This method can not be relied on, because, not being able to appreciate slight differences in the distance from the eyes to the test-card, and making a probable mistake in each eye, the patient claims that both see better at, say a distance of thirteen inches, whereas, in reality, the one is focused for twelve inches and the other for fourteen inches. It may be supposed that the eyes are now focused at the same distance; but they are not, until you have made a difference in the strength of the lenses equal to 40/12 diopters minus 40/14 diopters, or more than .38 diopters.

By virtue of the fact that the patient is not able to distinguish slight differences in the distance from the test-card to the eyes, you can not get a good result while the test-card is held at a fixed distance.

I increase the spherical strength of lenses to what I think will be necessary to make the anterior focus at the proper distance from the patient's face. Then I have him hold the test-card at the place of best and easiest vision, and use the last method spoken of for distance. If he choses a plus glass on one side and a minus glass on the other, I proceed as before mentioned. If, however, he chooses plus in front of both, I have him hold the card a little farther off, and if minus, a little closer to his eyes, and then repeat the process. When he can not choose between the plus and minus glasses the eyes are balanced.

DISCUSSION.

DR. JAMES THORINGTON, Philadelphia—In making this final test in estimating the refraction I think it is always well that we proceed slowly with the previous steps, for that is the way to perceive any decided benefit after we have proceeded carefully in testing each eye separately. There are two points that ought to have careful consideration—the first is to have the lenses used in testing the vision for distance placed very close to the eye, and the next is to have the lenses properly centered before the eye. To do this you have to ignore the trial frame as a rule, because so many of them are not adjusted to the patient's face. I often use the trial frame attached to the Risley phorometer and having tested each eye separately and then testing the eyes together in the way the doctor suggests I find there is very little advantage and that very few patients will appreciate the +.25D., but will quite frequently accept the —.25D. This is decidedly the case with myopics. Then there is this danger, that if you do not place Dr. Stevenson's instrument close to the lenses you get something of a periscopic effect. In presbyopia I find that a certain percentage can not always differentiate 0.25 plus or minus, with any degree of certainty; I therefore hesitate to embarrass them by asking for a positive answer. Patients come to us to have their glasses selected by us, and depend on our judgment; if they must decide for themselves then they think they might just as well visit an optician.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

DR. MARK D. STEVENSON, Akron, Ohio—As a rule patients very quickly decide which lenses they prefer, and I consider that lenses of .25 diopter strength are sufficiently strong and I often use lenses of .12 diopter. When the patient is not under the effect of a cycloplegic and there is a tendency to accommodate, if the vision of the two eyes is unequal the patient would be apt to choose a minus glass before the better eye, but when the vision in both eyes is equal there should be no choice for the purpose of accommodating. I have failed to find any reference to this method of fitting in literature.

DR. J. A. LIPPINCOTT, Pittsburgh—I would like to say that I think this little apparatus a very convenient one and it may serve a useful purpose. I have used the same principle for a great many years by simply holding a +.25 and —.25 in either hand and transferring them during the examination. This apparatus will enable us to save time and trouble and I think there is no question of the value of making this test with both eyes open after you have completed the test with both eyes separately.

KERATITIS BULLOSA, WITH REPORT OF CASE.*

ELLET O. SISSON, M.D.
Member of the International Congress of Ophthalmologists.
KEOKUK, IOWA.

My reason for reporting this case is because it is one of great rarity. Statistics go to show that keratitis bullosa is the least frequent of all corneal troubles. It is fortunate for both the physician and the patient that such is the case, for it is one of the most painful affections that the eye is liable to, and in the majority of cases baffles all therapeutic and surgical measures adopted for its relief. The disease occurs in the eyes, the cornea of which is more or less clouded and sensitive, or in eyes with a large corneal cicatrix, or eyes which have been rendered blind by iridocyclitis or by increase of tension.

Jansen[1] describes a primary form occurring as the result of an abrasion of the cornea by the finger-nail, a twig or some such object. But the majority of cases are secondary and occur as the result of the diseased processes above mentioned. This disease is characterized by the formation on the cornea of large tremulous bullæ which last for several days before they rupture. They are not tightly distended, but form a lax, tremulous, somewhat dependent sac. After their rupture the lax anterior wall still lies upon the cornea, and can readily be made out by the way in which it can be displaced by the movements of the lids. In all cases the bullæ show a great tendency to take on frequent recurrences, in each of which the irritative symptoms set in anew. Violent symptoms of irritation, such as ciliary injection, lachrymation, photophobia, and more especially great pain, are usually present during the development of the bullæ. These doubtless are caused by the pulling upon the corneal nerves which pass into the epithelium, and which, in the process of formation of bullæ are first stretched and finally torn in two.

The irritative symptoms ordinarily disappear with the rupture of the bullæ. The bullæ appear to have a double origin. 1. According to Fuchs, the lymphatic stasis of glaucomatous eyes produces an interstitial edema of the epithelium, which tends to the production of vesicles, etc. 2. The continual irritation of the corneal epithelium alters the nutrition of the cells. Above all, the cells of the middle layer are transformed into clear vesicles, which in places acquire a very large size. The cellular membranes of these larger vesicles are destroyed, and in this manner a lacuna is produced, which is often rather large, and becomes more and more distended; such a vesicle is covered by epithelium that separates it also from Bowman's membrane.

The first mode of formation produces vesicles covered by epithelium and resting upon Bowman's membrane; the second method furnishes the intraepithelial vesicles. Vesicles which lie in the substance of the corneal membrane have also been described; they are said to be developed underneath Bowman's membrane. This point, however, merits further research.

The prognosis is so far unfavorable in that the disease often recurs, on which account the affected eye, besides being useless for purposes of vision, is the source of constant discomfort to the patient. The treatment should aim at relieving the condition of irritation produced by the eruption of the bullæ, and at preventing the recurrences. Sometimes we do not put a stop to the recurrences until we have improved the conditions for the nutrition of the eye by means of an iridectomy or posterior sclerotomy; we may even find ourselves compelled, as the operator was in this case, to perform enucleation of the diseased eye in order to give the patient relief.

Mrs. L. presented herself at my office July 12, 1898. She was of German descent, about 50 years of age; had always had good health; was the mother of several children. Subjective symptoms: Patient said that she had had the present eye trouble for about a year; had been better at intervals; no history of any injury; was suffering great pain at this time. An examination showed the presence of a large tremulous bulla measuring 4 by 5 mm., situated nearly in the center of the cornea. The remaining portion of the cornea was clear, anterior chamber of normal depth and T. normal. There was ciliary injection, lachrymation and some photophobia. Further examination revealed the presence of a cataract and complete posterior synechia of the iris; V.=0. This condition was undoubtedly the cause of the keratitis.

I adopted the usual mode of treatment, namely, opening the bullæ and touching the raw spot with nitrate of silver solution. I also used a strong solution of atropia, with the hope that I might break up some of the adhesions of the iris, and thus improve the nutrition of the parts. But I soon found this to be fruitless, and had to limit the treatment to simply opening the bullæ, which would give the patient relief for the time being, and perhaps a night's rest, but the next day another large bulla would develop on the same spot and the patient would again suffer excruciating pain. She would beg me to remove the eye, saying that she could not stand it. This I was loath to do, as the eye ball was perfect and not in the least unsightly, and most of the time there was not even congestion of the bulbar conjunctiva.

On August 24 I determined on making an iridectomy. Cocainizing the eye, I made the usual incision with a keratome, but I experienced considerable difficulty in dragging forth the iris; as before stated, it was firmly bound down by adhesions, which were hard to loosen, the iris tearing first. But I succeeded in making a fair-sized coloboma, dressed the eye as usual in such cases, and awaited results. The case progressed nicely, patient suffering no pain, and there was no sign of a return of the bulla after several days had elapsed. I began to feel quite hopeful of success, and had arranged to dismiss the patient from the hospital, when, behold! one morning when I removed the bandage preparatory to dressing the eye, I discovered a completely formed bulla on the

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

[1] Arch. d'Ophthal., April, 1898.

same spot, the only difference between it and the previous ones being that it was not quite so large. This was my only consolation, and I hoped that after the eye had completely recovered from the operation they might disappear altogether.

For several weeks following the patient suffered less pain than previously, the bullæ not being as large nor lasting as long, but the condition gradually became worse, until on October 9, 1898, I was forced to enucleate the eye. I would much rather have performed evisceration in this case, inserting a glass ball after the manner of J. Webster Fox or the aluminum one of D. Bryant, but the patient was not suitable for such an operation, being very intractable, which is not desirable for such delicate work, where complete submission and assistance on the part of your patient enables you to obtain a much better result. She made an uneventful recovery after the operation, and, after fitting her with a glass eye, she was one of the happiest women imaginable.

CHEMICAL FACTORS IN INTERSTITIAL GINGIVITIS.*

W. L. BAUM, M.D.
CHICAGO.

In dealing with the influence of any etiologic factors, these factors must be considered in connection with the organism on which they act—the latter in its constitutional aspects and in regard to its condition at the time the chemical factor begins its action. The local condition of the parts affected must likewise be taken into consideration. As the gums at times take upon themselves the function of excretion, they are peculiarly apt to be affected by chemical action. Prominent among the agents which produce effects on the gum and the other transitory structures are the alteratives and tonics. Arsenic, gold, iodin, iron, mercury, brass, lead, copper and phosphorus all produce, by their excretion through the gums, conditions of edema, which are predisposing factors to interstitial gingivitis. Arsenic, gold, iron, phosphorus and mercury all set up an inflammatory condition. Among the vegetable alteratives having a like action; colchicum, guaiac, salicylic acid, sarsaparilla and pilocarpin are also factors to be considered. It must be remembered also, that these alteratives and tonics, through the production of edema, furnish a culture-medium for microbes. Exceptional instances of the influence of drugs on the gums are found among the anthelmintics, cathartics, diaphoretics, diuretics, emetics and expectorants. Instances are also found among the narcotics, rather from a secondary action than from the immediate consequence. Musk, opium, hyoscyamus, valerian, veratrum, acetanilid, phenacetin, phytolacca and phenocoll, all exercise an influence as either a predisposing or an exciting factor, or both. The bromids, as might be expected, exercise a decided influence in this direction; indeed, the condition for bromidism resembles, so far as its marked symptoms are concerned, very decidedly the condition produced by mercury. The same is true, though less frequently, of antipyrin, chloral hydrate, chloralamid and chloralose. The conditions produced by mercury, gold, the iodids, the bromids, phosphorus, arsenic and antimony are well known. The vegetable drugs are much less frequently taken into consideration, and the same is true of the coal-tar compounds. The key to the effects of any drug in this direction is to be found in the untoward effect of the drug; as Kiernan observes, the most potent remedies are most fertile in untoward effects. A drug of potent physiologic action must of necessity try more severely than an inert drug, inherited and acquired deficiences of constitution. The excessive strain on inhibitions weakened by acquired or inherited taint, gives an undue sway to inhibited centers. The action, therefore, of drugs, as shown in the untoward effects, reveals the weakest point in the organism, the point at which drugs are excreted, and also the glandular structures for which they have a predilection. It should be remembered, also, that alteratives, narcotics and tonics exercise an influence over that part of the nervous system which presides over growth and repair. Such an influence may either check or aggravate the processes of growth and repair.

The histologic appearance of the structure affected in interstitial gingivitis, secondary to mercury, according to the work of Talbot, showed that the epithelial lining of the gums did not present pathologic changes, but appeared normal in every respect. Connective tissue below the gum-epithelium—the tissue analogous to the papillary layer of the derma and the derma proper—presented unmistakable evidences of a mild inflammatory process. There occurred in this connective tissue round-cell infiltration, generally moderate, but in some places quite dense. This cellular infiltration extended from below—where it was densest—upward into the papillary layer. The densest cellular infiltration usually occurred around the vessels.

Under high magnification, the cellular infiltration was found to consist of polymorphonuclear leucocytes, plasma cells and plasma-mast cells, the latter with coarse basophilic granulations.

In some places were seen between the round cells, short, broad, fusiform cells, the protoplasm of which took quite well basic methyl blue. These cells resemble fibroblasts very much and appear to be derivations of the plasma cells. No bacteria were found either in the areas of cellular infiltration—inflammatory areas—or elsewhere. In these cases it is obvious that there had occurred a mild inflammation of the gums—gingivitis. While this could not be seen with the naked eye, microscopic examination demonstrated histologic features of an inflammatory process. The absence of bacteria justified the belief that this inflammation was not of microbic origin, but due to mercury, which, by its well-known chemotactic influence, produced the histologic changes of an inflammation.

A further study of Talbot's specimens shows that the irritation chemotactically produced results in an inflammatory reaction upon the intima of the vessels, setting up an endarteritis which, by the thickening of the intima and proliferation of endothelial cells, ends in occlusion of the vessels—endarteritis obliterans—thus by cutting off the nutrition, producing an anemic infarct, which either undergoes absorption or becomes necrotic. The bacteriologic invasion is always secondary to this process.

What is true of mercury is also true of other alteratives.

*Presented in a symposium on Interstitial Gingivitis, to the Section on Stomatology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

A. T. STILL, M. D., the founder of the osteopathic cult, in the *Journal of Osteopathy* for July, delivers himself of the following lucid sentence: "All bones and softer parts must obtain all matter entering their form and kind." This reminds one of the cheerful and enlightening conundrum: "Why does a mouse spin?"—*Cleveland Journal of Medicine*, July.

THE CONSTITUTIONAL TREATMENT OF INTERSTITIAL GINGIVITIS.*

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CHICAGO.

At no previous period in the history of medicine has the importance of a thorough acquaintance with the human system as a whole and of the interdependence of the various organs been so well recognized as to-day. Since local diseases are scarcely ever uninfluenced by the systemic condition, it becomes important to consider their constitutional as well as their local treatment.

Interstitial gingivitis is a disease comparatively unknown to the general practitioner, but it is to be hoped that the recent investigations which have thrown such a clear light upon its nature and effects will arouse the interest of the profession, so that its treatment will be undertaken at a stage when there is hope of recovery without permanent injury to the gums or teeth and before serious affection of other organs arise from it.**

Interstitial gingivitis, or so-called pyorrhea alveolaris, has been classified by Dr. Talbot[1] as due to local and constitutional causes. The constitutional causes include mercurial, lead, brass and other drug poisoning on the one hand, and autointoxication on the other. Dr. Talbot has shown that this disease has its origin in the tissues of the gum and alveolar process, and that atrophic changes precede the invasion of the tissue by micro-organisms. These primary atrophic changes are due to poisons circulating in the blood, and hence the disease falls into the large group of affections caused by autointoxication. The constitutional treatment of this disease must be governed by its etiology. Successful treatment must keep in mind the toxemia by which it is caused and endeavor as far as possible to trace the origin of the poison which is at the root of the local disease.

Autointoxication means self-poisoning, and has received a somewhat wide application, so as to include all cases of disease in which the poisons that produce the symptoms arise within the system and are not produced by recognized pathogenic organisms.

These poisons may be divided into several classes: 1. Poisons produced at all times by the ordinary metabolic activity of the tissues, which accumulate in the latter until they produce the symptoms of disease; 2, poisons produced in abnormal amount by the unnatural metabolism of certain tissues; 3, poisons produced by the metabolism of the tissues, but which are not produced at all in health; 4, poisons produced by bacteria in the intestines or other parts of the system, and which accumulate in the body in consequence of imperfect action of the eliminating organs; 5, poisons produced in abnormal quantities by bacteria in consequence of circumstances favoring bacterial activity; 6, poisons produced by bacteria which are not normally formed in the system.

In general we may divide these poisons into two classes, according to the place where they originate: 1. Those which are formed by fermentation in the stomach or intestines; 2, those which originate in improper metabolism of the tissues. According to Pœhl,[2] these two can be distinguished by analysis of the urine. The substances arising from fermentation in the intestines include several aromatic substances which are excreted as conjugated sulphates. When the proportion of ordinary sulphates to the conjugated or aromatic sulphates is ten to one or less, intestinal autointoxication is present. The same condition is indicated by a marked amount of indican in the urine.

Pœhl believes the abnormal metabolism that results in autointoxication to be due to a diminished intra-organic oxidation. This is due to: Deficiency of oxygen or diminished alkalinity of the blood, in a normally alkaline blood. Leucocytosis occurs, with a considerable destruction of white blood-corpuscles, which sets free spermin. This latter substance acts as a ferment that hastens the oxidation in the tissues. The lowering of the alkalinity of the blood is a potent factor in increasing the susceptibility of the system to infection, as has been shown by the researches of Von Fodor,[3] Behring,[4] Calabresse,[5] Cantani[6] and others. This condition is shown, according to Pœhl, by the analysis of the urine. If the amount of disodium hydrogen phosphate falls below 50 per cent. of the total phosphates there is lessened alkalinity, and autointoxication has begun. The coefficient of Zerner, which consists in the ratio of uric acid to the total phosphates, is of value. A ratio higher than 0.4 per cent. indicates lowered alkalinity. The relation of the chlorids to urea may also be taken as a similar measure; it should not be less than one of NaCl to two of urea. Armstrong[7] cites the port-wine color given to urine by the addition of ferric chlorid as an indication of autointoxication. This reaction occurs especially in cases due to dilatation of the stomach.

The symptoms of autointoxication are very various, and many grave conditions have been traced to this source. Among the severe forms of disease that have been shown to be the result of autointoxication are the following: Epilepsy,[8] neurasthenia,[9] migraine,[10] neuralgia, tachycardia,[11] Basedow's disease,[12] asthma,[13] tetany, gout, amblyopia,[14] albuminuria,[15] urticaria.[16] Dr. Talbot has shown that intestitial gingivitis is one of the first, if not the first, symptom of autointoxication. Recent researches of Vaughan Harley indicate that scurvy is caused by ptomains from tainted meat and the condition of the gums in scurvy is closely allied to that of pyorrhea.

In its milder forms we may usually describe the course of the symptoms as follows: One of the most prominent symptoms is headache, which varies in severity according to the sensitiveness of the subject. Poisons produced by autointoxication usually cause contraction of the arterioles, with consequent rise in the arterial pressure. This rise of blood-pressure may so stimulate the kidneys as to increase the quantity of urine and cause the elimination of the poison. In these cases the symptoms produced by the poisons are wanting or insignificant. If the rise in blood-pressure is considerable, the symptoms of asthma may supervene. M. Huchard[13] states that in some cases the contraction of the vessels may be so great as to produce a pallor that simulates chlorosis. In such cases the pallor disappears upon regulation of the diet, by the removal of meat, so as to prevent the formation of the toxin which produced the contraction of the vessels. On the whole the contraction of the blood-vessels, and consequent rise of blood-pressure, must be regarded as salutary, being a provision of nature for the elimination of the poisons. Other symptoms are due to the elimination of waste material by

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**Hunter has attributed infection of the stomach and consequent pernicious anemia to germs swallowed from the mouth.

other emunctories than the usual ones. The natural excretions do not seem to produce any disturbance in the eliminating organ, but an unusual poison will produce violent symptoms by irritating the organ by which it is excreted. Thus when the kidneys are performing their functions imperfectly the skin or bronchial mucous membrane shows irritation in consequence of vigorous efforts at elimination. As a result of these efforts there may be itching of the skin, eruptions of urticaria, eczema or cough and bronchial irritation extending even to catarrhal inflammation. Salivation is an occasional symptom. We know that mercury is eliminated in the saliva, and the same is doubtless true of other poisons, including those of autointoxication. J. C. Simpson[17] thinks that the salivation of pregnancy is due to a toxic substance absorbed from the uterus. Bouchard has isolated from the urine of healthy men a substance that will produce an increased flow of saliva. Salivation may, therefore, be regarded as one of the danger signals in autointoxication.

The constitutional treatment of interstitial gingivitis resolves itself into the treatment of autointoxication, and especially of those forms that are liable to cause the disease.

Three indications are to be met in the treatment: 1. To stimulate the eliminating organs; 2, to fortify the system against the action of the poison; 3, to prevent the formation of the poison.

The three important emunctories through which poisons—whether introduced from without, or produced in the system itself—are eliminated are the skin, kidneys and bowels. Of these the skin is the most accessible, and ought to be most susceptible to treatment.

That even metallic poisons can be eliminated by the skin is shown by the elimination of lead in this manner, and by the deposition of silver in the skin when the metal is given for a long time. A similar function is shown by the formation of crystals of urea on the skin in cases of kidney disease, where the eliminative action of the kidney is impaired.

The therapeutic problem in the treatment of gingivitis will best be solved by methods that serve to keep the skin up to its highest efficiency as an eliminative organ, rather than by spasmodic stimulation followed by periods of inaction. Hygienic measures should be utilized to the utmost, while drugs should be used only as adjuvants. The conditions under which the skin reaches its highest efficiency as an eliminating organ are warmth, cleanliness, free cutaneous circulation and an abundant supply of moisture. To secure these conditions requires the attention of the physician to the subject of clothing, but it is beyond the scope of this paper to enter into details in regard to this subject.

The importance of an equable temperature for all parts of the skin is shown by the results of experiments, which indicate that chilling of certain areas of the skin affect the circulation of the internal organs, and also tend to lessen the rapidity of circulation in the skin of other parts. Elimination by the skin is promoted by a judiciously applied hydrotherapy, but the external use of water accomplishes much more, so that several indications are fulfilled at the same time. Warm or hot baths and the friction that follows them promote a free cutaneous circulation. The value of the Turkish bath is well known, but its expense and the danger of subsequent chill tend to limit its utility. The old-fashioned alcohol sweat acted on the same principle, and was a powerful therapeutic agent. The bath cabinets now on the market seem destined to remove the objection of expense, and the use of the hot-air bath deserves the attention of the profession for the relief of autointoxication as well as in the treatment of more serious affections, like dropsy and uremia. It should be given under careful direction from the physician or medically educated dentist, who should be well acquainted with its physiologic action as with the action of the drugs which he employs. For the treatment of migraine Steel[18] recommends, in addition to a vegetable diet, the use of hot vapor baths, cold sponging and vigorous rubbing, suiting his measures to the condition of the patient, and using one or all, according as his judgment determines. He reports very gratifying results. We have in the cold bath a powerful agent for the stimulation of the nervous system, for increasing the alkalinity of the blood and profoundly influencing the metabolism of the tissues.

Strasser found that cold baths increased the alkalinity of the blood. The cold bath by its temporary contraction of the arteries drives the blood more rapidly through the kidneys, liver and other internal organs, and thus improves the action of the other eliminating organs as well as the skin.

Armstrong[7] recommends the use of the needle spray and general faradization. He also recommends, as a means of stimulation of the nervous system, an application of mustard, which he calls the double-mustard pack. This is made as follows: Two large poultices are made of mustard bran and applied, one to the nape of the neck and down the spine, and the other over the region of the stomach and liver. The application is made for fifteen minutes every second day.

While the free action of the skin is to be encouraged, it should not be carried too far or adopted as an exclusive method of treatment. Bouchard[15] suggests that too free action of the skin may be prejudicial by lessening the activity of the kidneys, and thus in some cases inducing rather than preventing autointoxication. This condition is noticed in summer, when, with excessive sweating, the urine becomes scanty and irritating, and at the same time the skin is affected with pruritus or with urticaria. This danger is, however, easily guarded against by the free use of fluids.

The importance of excretion by the kidneys has never been overlooked by the profession, and the means by which it can be promoted are well known. Diuresis depends upon two factors: increase in blood-pressure and stimulation of the kidney epithelium. The increased blood-pressure is promoted by two means: contraction of the arterioles and increase in the force of the heart's action.

As has been said, the contraction of arterioles by most auto-poisons tends to bring about their own elimination if the heart acts with sufficient vigor, and all that may be needed to secure the elimination of the poison is to secure the vigor of the heart, and in cases where the formation of the poison has ceased, this will terminate the disease. Digitalis acting as a heart tonic and raising the blood-pressure at the same time, stands in the front rank as a diuretic, and may often act favorably when there is no heart lesion to require it. Caffein appears to act not only by stimulation of the heart but also by a special action on the kidney epithelium. The close relation of caffein to bodies of the xanthin group renders its employment of doubtful utility in cases where the intoxication is due to the presence of this group. In cases of doubt it is probable that an estimation of xanthin bases in the urine might be a

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valuable guide in deciding whether to employ caffein as a remedy, or to exclude coffee, tea and chocolate from the dietary.

The saline diuretics act by their influence in withdrawing water from the tissues and thus increasing the volume of the blood. They are thus well suited to the removal of poisons that have been deposited in the lymph-spaces, and ought to be especially useful in the treatment of gingivitis. The action of alkaline diuretics also promotes oxidation and thus they serve a double purpose.

The free imbibition of water affords the readiest and best means of sustaining the action of the kidneys. That the American people drink an insufficient amount of water is shown by the fact that the average amount of urine is less in this country than in other countries. When the daily amount of urine is less than three pints a good indication is afforded for the administration of water and diuretics. It will often be found to be less than a quart.

The water will be taken more freely and with less repugnance if it contains a small amount of salts. An alkaline mineral water containing only a small amount of solids is especially suitable for the purpose. The amount of water used should be such as to materially increase the amount of urine.

The eliminating function of the large intestine is shown by the fact that mercury is eliminated by this channel, even when it has entered the system by other avenues than the stomach. That the liver also acts by eliminating poisons in the bile is well established. The cure of autointoxication demands, therefore, the use of agents to stimulate the liver and the large intestine. Calomel has long held the confidence of the profession as an agent that produces an increased action of the liver, and clinical experience seems to justify the continuance of the confidence. The question has not been settled experimentally, but the favorable effects derived from it in practice indicate that it must act in some way not yet revealed by experiment. The further action of calomel as a purgative renders it an invaluable agent in the treatment of autointoxication.

The use of purgatives can not well be considered separated from their action as eliminating agents. The value of purgation is generally recognized, and we can only add some recommendations as to the particular agents to be used. Prof. H. A. Hare[19] recommends the following pill in the treatment of a case in which epileptiform convulsions were due to autointoxication:

℞ Extract chiretta.....gr. ii
Leptandrin.....gr. ss
Podophyllin.....gr 1/5
Euonymin.....gr. ss
Beechwood creosote.....gr. ss

M. Ft. pil. Sig. One to be taken three times a day, after meals.

In addition he gives Hunyadi water in sufficient quantity to secure a semifluid stool.

Prof. D. R. Brower[20] in the treatment of neurasthenia due to autointoxication recommends four parts of sodium sulphate to one part of sodium phosphate as a purgative in intestinal dyspepsia.

The defenses which the organism possesses against the action of poisons are: 1, the power of the liver to destroy poisons absorbed from the intestines; 2, the general oxidizing power of the system; 3, the action of special organs such as the thyroid. To fortify the system against the action of poisons we need to stimulate these activities. A large proportion of the toxic substances whose actions produce the clinical picture of autointoxication consists of immediate links between the albumin molecule and the final results of oxidization produced by the metabolism of these substances in the body. The final products of oxidation are comparatively harmless, while those substances which represent a less advanced degree of oxidation are usually poisonous in proportion to their remoteness from the final product of metabolism. Thus urea is harmless, while uric acid, which represents a lower degree of oxidation, is irritating and somewhat poisonous, and xanthin, which contains less oxygen than uric acid, is more decidedly poisonous than the latter. Lastly we have adenin, which contains no oxygen and is a powerful poison. In all probability the most poisonous leucomains are complex compounds more nearly allied to albumin, which have not been isolated. The more complete the process of oxidation in the system the less the organism will be affected by the poisons of autointoxication. If, therefore, the natural oxidizing processes of the system can be promoted, these substances will be converted by oxidation into less noxious or harmless compounds whose excretion is easy. The process of oxidation in the body is a function of the cells and is carried on best in an alkaline medium. The alkalinity of the blood is known to increase in the progress of an infection *pari passu* with the acquisition of immunity by the organism and the destruction of the toxins of the disease. A similar process goes on in the recovery of the organism from autointoxication.

The alkalinity of the blood may be kept at its maximum by securing the excretion of acid by the kidneys and skin, by preventing the formation of acid, by the administration of alkalies, and by the use of a meat diet.

The administration of the alkalies does not markedly influence the alkalinity of the blood, but there is no reason to doubt that they affect the reaction of the lymph and increase the oxidizing powers of the system. The oxidations going on in the system, depend upon the activity of the cells and, therefore, will be favored by the renewal of the lymph which bathes these cells. The beneficial effects of massage find in part their explanation in the increased activity of the lymph circulation which it brings about. The cold bath as a means of stimulating the nervous system has already been referred to. Tonics like strychnin have a similar action.

Is is possible to introduce into the system oxidizing agents that will act either independently or in conjunction with cellular activity to promote the oxidation and destruction of poisonous substances circulating in the blood? On the discovery of the active oxidizing powers of certain agents it was assumed that they could be made to give up their oxygen inside the body as they do outside and thus affect therapeutic results.

By many physicians it was once thought that, in potassium chlorate we had a source of oxygen as available when taken internally as when used in a retort in a chemical laboratory. But experience has shown that such analogies can not be pressed too closely and that the process of oxidation in the system goes on by the intervention of the chemistry of the cells and probably in no other way. It is quite possible that the cell may make use of extraneous oxidizing agents as it uses the iron of the red blood-corpuscle for the purpose of carrying oxygen.

Ratchford[21] recommends potassium permanganate to neutralize poisonous ptomains circulating in the blood. He gives it in pills coated with salol, each containing one grain. One of these is taken three times a

day, an hour after meals. In addition to the permanganate he gives a mixture of sodium salicylate, sodium phosphate, and sodium sulphate. It is improbable that potassium permanganate acts as an oxidizing agent after absorption into the blood. The results of its use in opium poisoning seem to show that it is efficacious by oxidizing morphin in the stomach, but does not act after absorption[22]. It has been suggested by Prof. W. S. Haines that hydrogen dioxid might act after absorption into the blood, because it has been shown that it can exist in the blood. Pœhl would employ spermin for this, while others recommend nuclein. Poisons absorbed from the intestinal canal are largely destroyed by the liver. This is well illustrated by the formation of urea from ammonium carbamate by the action of that organ. If the liver be removed from the circulation by making an Eck's fistula so that the portal blood is carried directly into the vena cava, urea is no longer formed, but instead the blood becomes loaded with ammonium carbamate, which is a powerful poison producing symptoms similar to those characteristic of uremia. That the liver performs a similar function with regard to other poisons is well established. The regulation of the action of the liver is, therefore, of prime importance in the treatment of any disease depending upon autointoxication. For the stimulation of the liver only two drugs seem to be effective, sodium salicylate and inspissated bile. Of these, the latter is doubtless preferable as being more of a physiologic agent. The abandonment of sedentary habits and the use of fresh air and exercise are to be recommended where there is reason to think that the liver is inactive.

In this connection we may speak of a maneuver suggested by Moebius[22], and which he states he has practiced on himself with great success in relieving certain pains attributable to congestion of the liver. It is probable that this maneuver would be useful in stimulating the liver to perform its functions. Moebius terms this procedure, hepatic massage. He describes it as follows: He first takes a deep inspiration, by which the liver is depressed one or two centimeters below the edge of the ribs. He holds his breath as long as possible and then expires slowly. By this means the liver is compressed between the walls of the abdomen and the diaphragm. The operation is carried out most advantageously when sitting in a rocker with side arms.

Second in importance to the liver stands the thyroid. The chemistry of the thyroid offers some explanation of its action and of the use of two remedies which have heretofore been classed as alteratives without our being able to give a satisfactory reason for their action.

The discovery of thyroiodin by Baumann and the demonstration of the marked therapeutic effects of thyroid extract and of thyroiodin in various diseases marked a great advance in scientific therapy. Recently Roos[23] has shown that the activity of the thyroid depends upon the iodin-containing substance and is greatly increased when the gland contains much iodin and fails entirely when the gland is free from that substance. In the wild state, herbivorous animals contain more iodin in the thyroid than carnivorous, whose thyroids are sometimes free of iodin. With dogs, however, the amount varies with the food, being small or wanting on a meat diet, increasing with a mixed diet, and being very large when doses of iodin are administered in addition to that contained in the food.

The researches of Blum[24] led to the conclusion that the thyroid acts by storing iodin in its substance, which it causes to combine with toxins, forming toxalbumins partly saturated with iodin, which gradually renders them innocuous. The fact that this toxalbumin does not produce its effects on metabolism during life indicates that it does not pass into the circulation. This is further indicated by the fact that long-continued withdrawal of iodin from the food does not affect its removal from the thyroid. When, however, iodin is administered, the amount in the thyroid increases. If, as these researches indicate, the action of the thyroid is dependent on its iodin and consists in the destruction of toxins or toxalbumins, by separating them from the blood and combining them in its substance with iodin, the utility of the iodids is explained. The fact that the iodin acts through the metabolic changes in the thyroid would make it probable that the most efficient method of administration in autointoxication is by means of small doses extending over a long period of time. It is doubtful if doses large enough to enable the element to be detected in the urine should be given. The value of a mixed diet as affording a source for thyroid iodin is also indicated.

Recent researches by Gautier[25] have shown the presence of iodin in organic combination of sea-water, and it is probable that it is present to a very slight extent in all ordinary potable waters. The experiments of Oswald[26] show that the iodin-containing substance of the thyroid contains very nearly the same proportion of iodin as the iodin-containing proteid of sponge, known as spongin. It is possible that spongin might be an acceptable form in which to administer iodin.

Further researches of Gautier[27] show that arsenic is also a constant constituent of the thyroid, existing there in very minute quantity. This may also explain the valuable alterative properties of arsenic.

The third purpose of the treatment of autointoxication is to prevent the formation of leucomains, ptomains and toxins. The point of origin of these poisons can not always be ascertained, but careful search for all complications which might give rise to the absorption of toxins from the various mucous surfaces should be made. The nose, pharynx and tonsils, as well as the genital tract, should be scrutinized, and any disease found should be treated so as to prevent the absorption of poisons from these sources.

There is no doubt that in many cases putrefactive changes go on in the stomach or intestines, where we are not able to classify the disorder as a recognized disease of the stomach or intestines. These cases must be classed clinically as autointoxications, and the obviously rational treatment of them is the prevention of the formation of the poisons by fermentation.

The limits of this paper forbid our entering into a full treatment of the subject of intestinal antisepsis. We may attempt to control gastrointestinal fermentation: 1, by diet; 2, by excluding germs from the food before it is taken, and preventing their mixture with it in the mouth or the stomach; 3, by securing proper digestion, and increasing the natural antiseptic elements of the digestive secretions, viz., HCl in the gastric juice and bile in the intestines; 4, by securing the prompt passage of the food along the digestive tract and the prompt evacuation of feces; 5, by the administration of drugs as antiseptics.

While the exclusion of germs from the food may be impossible, their number should be reduced. In addition to the ordinary cleanliness and thorough cooking of food the cleansing of the mouth before and after each meal

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should be insisted on. Lavage of the stomach, or the use of large amounts of hot water before meals may be useful.

The secretion of gastric juice should be promoted by removal of all irritants, by cheerful surroundings at mealtimes, nerve tonics such as the cold douche, electricity, strychnia, etc. In cases where these measures fail, the administration of hydrochloric acid after meals should be resorted to, thirty minims of the dilute acid being given in two doses, one dose half-an-hour, the other an hour, after eating.

The antiseptic power of the bile has been denied on the strength of experiments which show that pathogenic organisms flourish in it. While this is true, we must concur in the opinion of Dr. Dock[28], who says: "Yet the changes in the odor of the intestinal contents in the absence of bile suggest that it may influence the forms of putrefaction and after the conditions of bacterial life in the intestines in ways that may be of great pathologic and clinical importance."

The prompt removal of feces from the alimentary canal is promotive of intestinal antisepsis. Vaughan Harley and Francis Goodbody have shown that washing out the large intestine by copious enemata is capable of decreasing the aromatic sulphates in urine and therefore causes a diminution of intestinal putrefaction. Calomel and other laxatives, even when they do not act as decided purgatives, diminish the amount of putrefaction in the intestine.

A desirable antiseptic drug should have the following characters: 1, it should have antiseptic power; 2, it should be non-toxic; 3, it should act through the whole length of the intestine. The least toxic drug fulfilling these conditions is charcoal. It is of very feeble antiseptic power, but it is non-toxic, non-absorbable, and acts through the whole length of the alimentary canal. Its power of removing alkaloids from solution makes it desirable for use in case we suspect the absorption of ptomains. It is highly recommended by Bouchard in his work on autointoxication.

Naphthol is a drug which has considerable antiseptic power and is not absorbed in sufficient quantity to produce toxic effects. Dr. Brower recommends benzonaphthol in ½-gm. doses, four times a day. Orphol, or beta-naphthol bismuth, combines the virtues of naphthol and bismuth and is deserving of trial as an antiseptic. The same may be said of eudoxin, or tetraiodophenolphthalein bismuth. The ordinary salts of bismuth are useful.

Salol, while much used, has two disadvantages: 1, it does not act in the stomach; 2, it is decomposed and absorbed from the upper part of the intestine and therefore does not act through the whole intestinal canal. It is also distinctly toxic in large doses.

The metabolism of the nervous and muscular systems is a source of poisoning. The production of lactic acid, creatin and other toxic substances occurs normally in the muscles, and excessive use of the muscles, or the moderate use of them in conditions of the system of which the oxidizing power is low, may result in such an accumulation of toxic material as to give rise to disease. In such cases the remedy is to reduce temporarily the amount of waste of the muscles by rest and to restore the normal power of oxidation and elimination. What is true of muscular exertion is equally true of nervous and mental exertion. Betscherew has suggested that fatigue, mental overwork and sedentary habits may disorder intestinal circulation and digestion, and so favor the production and absorption of toxins.

There is no more important element in the treatment of these diseased conditions than diet. We have to consider diet in reference to its composition, its digestibility, its liability to fermentation, and its relation to metabolism. Man is an omnivorous animal, and the dictum that "if we wish to be happy and healthy we must live on vegetable diet" is not justified by experience nor by science. Except as a temporary measure the diet should be a mixed one, containing the due proportion of proteids, carbohydrates and fats, with the organic salts derived from vegetables.

The evil effects of deviation from the normal diet are well illustrated, as Chittenden[29] remarks, by the production of acetone, probably from the metabolism of the fats, when carbohydrates are removed from the food. This is also shown by the influence of deprivation of fats in producing rickets. The composition of the food is also important from the fact that certain foods contain the precursors of some of the poisons which cause autointoxication. Thus uric acid and the members of the xanthin group are the result of the metabolism of the nuclein of the food. The foods that contain nuclein may be actually poisonous to persons that are affected with the so-called uric-acid diathesis. These foods are not, as has been supposed, the pure proteids or the flesh-food simply, but the animal food that consists largely of cells, and also vegetable foods that contain much nuclein, such as beans and peas and foods containing much seeds. Thus the experiments of Taylor[30] have shown that more uric acid is excreted under a vegetable diet consisting largely of peas and beans than under a diet of lean meat.

An important function of proteid food in carnivorous animals, and probably in man, is to maintain the alkalinity of the blood. Carnivorous animals withstand the effects of acid much better than herbivorous, because they are able to neutralize the acid by ammonia formed from the proteid materials of their food. This fact should not be forgotten in the treatment of autointoxication. The carbohydrate elements of the food are especially liable to yield acid products by imperfect oxidation, and should, therefore, be restricted in amount. Food that is easily digestible should be chosen. Carbohydrate food is especially liable to fermentation, and moderation in its use should be enjoined in cases where there is liability to fermentation in the intestines.

Authors differ somewhat in their recommendation of diet for the conditions due to autointoxication.

Hare recommends a diet free from fat. Huchard recommends a milk diet, and claims that by this means he can cure dyspnea and asthmatic symptoms in certain cases, while a return to a meat diet will bring on a return of the symptoms. Stekel reports a case in which migraine was brought on whenever the patient ate eggs. Armstrong[31] recommends for certain cases of gout, in which he believes there is autointoxication, the Salisbury treatment. This is carried out as follows: From three to five pints of hot water are taken per day, one pint before each meal. The diet consists exclusively of red meat without fiber or fat. No carbohydrates are allowed, except a half-slice of bread, cut very thin, and thoroughly toasted. Occasional aperients are given, and, if necessary, potassium citrate is administered to facilitate the excretion of uric acid. This diet is successful in some cases of gout that have resisted the usual methods of treatment. Its utility may be explained as follows: It excludes the carbohydrates, which greatly favor fermentation; it washes away the micro-organ-

isms which are found in the stomach and intestines, and promotes the alkalinity of the blood. In addition, it does not introduce much nuclein, so that it does not tend to increase the amount of uric acid and its congeners in the blood.

The constitutional treatment of gingivitis due to poisonous metals or drugs, as well as that due to scurvy, must be conducted on the same principles as when due to autointoxication. In all these affections the physician must bear in mind the various factors that enter into the causation in the case in hand, and adapt the treatment to the individual patient on the principles which we have endeavored to state and illustrate.

It is to be hoped that future investigations will enable us to trace the symptoms of autointoxication to the specific poisons from which they arise, and to adopt a specific antidotal treatment. But whatever the advance made in this line, it will remain true that our chief reliance in treatment must be upon judicious efforts to aid nature to eliminate or destroy the poisons of disease.

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LOCAL TREATMENT OF INTERSTITIAL GINGIVITIS.*

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CINCINNATI, OHIO.

Talbot, when treating of interstitial gingivitis, says: "The exciting causes are either constitutional or local, but as a rule are local, or have local action." Regarding his experiments on dogs, he says: "While it is by no means improbable that constitutional factors assist in its early progress in man, still the exciting cause of this disease is tartar." Dr. G. P. Carpenter's experiments tend to establish the law that without a locally exciting cause the disease would not exist as such. The writer is in full accord with these opinions; consequently, from his standpoint, the natural and all-important treatment is to first remove the local cause, by cleansing away the deposits found about the teeth, either superficial or deep-seated. This being accomplished, local germicidal and palliative treatment should be adopted and continued until health is the result, or failure established. To accomplish these ends many methods are pursued, but all must attain the same end before recovery can take place, namely, removal of the exciting cause, for the laws of growth and repair are always the same under the same conditions, and if the cause be removed before it is too late, complete recovery is the result, without further assistance from the physician, and, doubtless in many cases, in spite of him.

For convenience in classifying we make three arbitrary divisions, as follows: acute, chronic, and sloughing stages of the disease. The writer, after examination, appoints the earliest date possible for beginning the removal of deposits. The majority of these deposits are hard, but many are soft and cheesy, especially in young patients, and even these soft accumulations may produce the incipient or acute stage of the disease. It is the writer's opinion that these early and softer deposits and their consequent irritation, produce "the point of least resistance," which, in systemic dyscrasia, may terminate in the utter destruction of parts involved. In this stage, the complete removal of these deposits in one or more sittings, usually suffices for recovery as to local symptoms; if constitutional treatment is needed it most properly begins with the local work. The younger the patient the oftener and more watchful should be the attention in order to prevent progress of the disease. This treatment may be made three or four times a year, and to be continued indefinitely.

In the second or chronic stage, we will assume the tissues are diseased or destroyed one-third the distance from the normal gum-line to the apex of the tooth, involving the alveolar process with the outer periosteum and the gum tissues. In this instance, as in the other, all deposits must be removed, and infected bone taken away; this will require from three to ten sittings, from a week to ten days apart.

The sloughing stage may be defined as that wherein so much of the tissues have been lost that the tooth is abnormally loose, indicating that more than half the bony support has disappeared. To induce recovery in this class of cases, demands of the practitioner his keenest knowledge of pathology, and his greatest skill in assisting nature to produce what the surgeon would call a "healthy stump." The procedure here is the same as in the previous stages, excepting that it requires much more care, and very greatly increased diligence, expecting the time for recovery to be much longer, if indeed it can be accomplished at all. In these cases, like all other pathologic conditions about the body, absolute reliance may be placed in the laws of repair, for there is a constant and continual effort on the part of nature to maintain the normal, and if we, as practitioners, are bright enough to remove exciting causes, we have done all that it is possible to do. This idea would include what we call palliative, stimulating, and antiseptic treatment. During this time we should keep constantly in mind the fact that we are merely trying to assist nature to accomplish what the laws of the universe are compelling her to do.

In removing deposits, each operator must select and use those instruments best suited to his individuality and the needs of the case, the necessity being to absolutely remove all deposits. It has been found that clean dentine or cementum, without peridental membrane, is, at least, non-irritating, while deposits of any kind upon the root surface irritate, and will stimulate a continuous effort on the part of nature to get rid of it. In this

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instance, however, the effort to get rid of foreign bodies fails of its object on the intruder, but acts on the surrounding tissues and destroys them; hence the pathology of the disease. The complete removal of deposits having been accomplished, the attention should now be directed to the alveolar process, and dead bone or other foreign substance taken away. In actual practice, the work necessary to remove deposits usually removes all other irritating substances. Dead tissue may be absorbed, but these deposits never are; hence the necessity of their removal.

If it were possible for all this to be perfectly done at one sitting, and the wound dressed and allowed to remain quiet and in perfect position, as can be done in other parts of the body, then no further attention would be necessary, aside from one or two redressings, several days apart, to maintain antisepsis. A week or ten days is suggested, for the reason that this length of time is usually necessary in the process of healing, for new material to be formed. To irritate a wound with treatment every two or three days would seem a hindrance rather than a help to the process of repair, and this seems especially true with the sockets of the teeth.

One of the most impressive, and I might say astonishing, things that has happened to the writer was viewed while pursuing embryologic studies in the laboratory. To watch, through the microscope, the manner in which channels, or blood-vessels are formed in embryonic tissue or blood-clot was fascinating beyond measure, leaving an impression never to be effaced. The blood has many important offices, not the least of which is that of clotting. A minor wound which can fill itself with blood-clot and be kept aseptic, will sooner or later be rebuilt with its own kind of tissue, providing, of course, the power of the organ to functionate has not been destroyed; should this function be performed, then a healthy stump, or scar material of the next adjoining tissue, is the natural result. To destroy or even disturb blood-clot in an aseptic wound, within twenty-four or forty-eight hours after it has formed, is simply tearing down or injuring the false or preliminary scaffolding that nature has constructed for the rebuilding of lost tissue, hence the necessity of allowing a wound to remain quiet until sufficient effete matter has accumulated to need removal, which is usually about a week or ten days.

If this view be accepted, then the typical procedure would be to remove, at one sitting, all foreign matter in or about the sockets of the teeth. The endurance of the patient might compel this to be confined to one or two teeth; this being accomplished, sterilize the wounds with medicaments, and permit them to fill with blood-clot, allow this clot to remain undisturbed so long as pus does not form. Just previous to, or at the time this stage arrives, the surplus matter should be taken away very carefully, but the new granulations should be most cautiously guarded from violence, if the most satisfactory results are to be obtained.

In actual practice, however, I believe most of us go over much of the field in one sitting, and often to the limit of the patient's strength. If several teeth can be thoroughly done at one time it is well; but the typical way, as stated, is to so do the work that no second scraping or cutting will be necessary, any more than an amputation should need be done the second time. Now, if the patient return in a week or ten days, a much improved condition can be seen, and where the work has not been perfectly done, there can be seen near the gum margin, dark or bright-red spots where deposits have not been removed. If this deposit be deep in the socket, then lack of granulation tissue and pus will be the result, and other attempts must be made until the point of recovery or failure has been reached.

For removing deposits the writer uses such instruments as are illustrated by Talbot, in addition to those styles recommended by Drs. Henry H. Tompkins and Storer How. I find instruments shaped like Dr. How's fissure chisels, of the greatest value in removing deposits from the approximal surface of the roots, for they are thin, strong and efficient, their varieties in shape will enable one to reach nearly all the approximal surfaces.

The medicaments used for treating the sockets may be any suitable antiseptics and stimulating remedy, and even escharotics may be applied with advantage to destroy tissue and bacteria, and produce a healthy aseptic wound, this latter condition being the true fundamental principle of repair. The writer's practice is to use 5 per cent. tincture of iodin in 50 per cent. alcohol, to which is added as much oil of cinnamon as will be held in solution by the alcohol. After the use of the instruments, this is injected into every part of the sockets with a hypodermic syringe, until the blood starts again, then the patient is discharged for one week or more. This treatment is continued until recovery of all the teeth is complete, or the best stage possible reached, in any event, retaining all teeth as long as practicable. Complete recovery of all cases, however, is far from the writer's experience.

Accompanying office treatment, the patient should be required to carry on vigilant attention to the case; satisfactory co-operation of the patient, however, is not always easy to obtain. This is so often true that I deliver stereotyped lectures in each case, on brushes, picks, dentifrices, and their use, with imperative and dogmatic instructions as to their continued use, believing that if the teeth are kept absolutely free from mechanical irritation or deposits, the disease, as we now know it, is practically out of the question.

A stiff serrated brush of the best quality with the rows widely separated, is recommended, with instruction to allow at least one-half of the width of the brush to rub the gums. This not only insures the removal of lodgement and deposits about the necks of the teeth, but gives a necessary massage treatment to the gums, keeping them hard and healthy.

Tooth-picks of soft wood are recommended for use between the teeth. These should be thick enough to rub against the teeth on either side, thus preventing accumulations on the approximal surfaces at the necks. Soft pine or other light wood serves best for this purpose, whittled flat and thin at the point, then gradually becoming thick enough to do the work well on both approximal surfaces. The hem of a handkerchief or other fabric may be used to advantage when the teeth are not too close together. Whatever plan is adopted the approximal surfaces at the necks should have exceeding care, for this is the locality first and most frequently attacked by the onset of the disease.

The fact that these localities are inaccessible to the cleansing action of food, tongue and lips, as well as to the brush, and that here the accumulations and disease most often make their start, tends to strengthen the belief that without local irritation the disease would not exist. It is our belief that these particular localities do

not receive adequate care, either from the patient or practitioner, principally because they are inaccessible and troublesome to care for, but for this very reason, they should have cautious and particular attention, especially in cases predisposed to gingivitis. For this purpose there seems to be nothing better in the patient's hands than the tooth-picks of soft wood referred to.

The matter of leaving injurious splinters in the gums is far-fetched, for if such a thing should by chance occur, the splinter would be discharged from the gums in the same manner as it would from any other part of the body with but temporary soreness. However, brushes and picks alone, fail of their object unless they be accompanied by an efficient powder. A false idea about powders for cleansing the teeth seems always to have prevailed, as it does to the present day, namely, that a powder to cleanse the teeth must be capable of polishing them, and on that idea, tooth powders have been compounded from time immemorial, when the fact is that the natural polish of the teeth is almost universally the best they can have. Abrasives, such as chalk, seashells and pumice stone, not only polish the enamel, but in time cut into the dentine at the necks of the teeth, which both dentists and patients know to their sorrow. The teeth do not need polishing, but simply to be kept free from deposits and lodgements. If this can be accomplished I think no one need fear disease of the gums, which always precedes peridentitis in all its variations.

To the end of being able to use a dentifrice *ad libitum*, without danger of abrasion, and one coarse enough to take away all that a powder should remove, the writer has, for months past, been compounding and prescribing a preparation made from the hard parts of cereals, such as rice and indian corn. The grit in this powder does the work most thoroughly, without the least injury or wear, as must be self-evident. Pulverized cereal has been objected to on the grounds that it ferments in the mouth. This is wrong, however, for only hydrated starches ferment, and to hydrate it requires boiling, the action of caustic alkalies, or long continued action of bacteria.

With this pulverized cereal is incorporated 25 per cent. of soluble ingredients for sterilizing the mouth and neutralizing its acids. These ingredients are sodium borate, potassium chlorate, and potassium nitrate in some cases. The formula mostly used is as follows:

℞ Pulverized cereal ..... 75 parts
Sodium borate ..... 18 parts
Potassium chlorate ..... 7 parts
Sweeten with saccharin, and flavor to taste.

As a dentifrice this cereal tooth-powder does no possible injury, even by excessive use, but is perfectly safe. It may be used freely and often enough to prevent any accumulations whatever on any surface accessible to a good brush. Under the use of this powder the accumulations are not only kept away, but the surface of saw-toothed abrasions at the necks of the teeth become dark, and loose their sensitiveness, showing that the abrasion has ceased. Many confrères in my own city, and some of those present, can testify to the efficiency of this formula, not only as a cleanser, but as a most satisfactory medicinal treatment. When there is no stomatitis or gingivitis, the medicaments tend only to keep the gums hard and the mucous membrane in perfect health.

The fallacy of splinters from tooth-picks, like that false idea of "injury to the gums by hard brushes," has been the negative cause of the loss of innumerable teeth to mankind. These ideas, coupled with the use of something gritty for polishing the teeth, are mistakes that should be stamped out of the profession by its thinking men. The failure to cleanse the teeth, the use of soft brushes and inefficient dentifrices, and the omission of tooth-picks are the great negative causes of the disease under discussion. Civilization may be held accountable for such omissions, and we, as custodians of the organs involved, are directly responsible for much ignorance in prophylaxis.

DISCUSSION ON INTERSTITIAL GINGIVITIS,

[The papers of Drs. G. L. Curtis, J. G. Kiernan and E. S. Talbot, belonging to this Symposium appeared in last issue.]

DR. E. S. TALBOT, Chicago—When I placed my book, "Interstitial Gingivitis," on the market, it met with considerable opposition from some of the ablest men in the profession. The point raised was that this was a local disease and not constitutional. In that work I said very little about the treatment of constitutional disease, for the reason that I wanted to develop a certain line of research, and to find some one capable, who had a large experience in the treatment of such conditions, before I undertook any further work in this direction. To offset the views of these able men—teachers and practitioners of dentistry—I formulated this symposium. Many of you, perhaps, are not familiar with the gentlemen who have responded to my request. I can assure you that in the West they are the ablest men we have in their various departments. They are men who have had life-long experience, and who have reputations in the special branches they practice. The object has been to show—which I think they have conclusively—that interstitial gingivitis, or pyorrhea alveolaris is due in a measure to constitutional causes. The very able paper by Dr. Curtis, and the illustration which he has presented is enough to show that syphilis is one of the marked conditions.

Twenty-four years' experience among the defective classes, paretic dementia, and other diseases of the brain, idiocy, ataxia, etc., has shown me that neurotic affections have much to do with this disease. This is also represented in practice by the degenerate patients.

So far as my own paper on indigestion is concerned, I think every dentist will agree with me that chronic dyspepties suffer from this disease oftener than any other, except the tuberculous and syphilitic, patients.

The very able paper by Dr. Baum—who last year read a paper on the factors of syphilis—is certainly interesting in relation to the action of drugs. Those of you who have read my paper on this subject can say how very clearly I have drawn the knot around all these constitutional conditions, including scurvy and blood poisons, and have united them—as shown by microscopic slides—into one pathologic condition.

In regard to the treatment of these conditions, I must say that the paper by Dr. Salisbury is surely of great interest to us, and if this lesion is to be treated in an intelligent manner, we, as practitioners of chemistry, must know something of all the diseases of the human body. If we undertake by local treatment to restore the lost or diseased tissues to health, and ignore the constitutional conditions—which I believe are noticed in at least 95 to 97 per cent.—we shall certainly make very poor practitioners. In regard to the local treatment as suggested by Dr. Fletcher, I can endorse his method in almost every particular. Each one of us has his peculiar methods of treating these conditions locally, but the general outline, as laid down by Dr. Fletcher, is carried out, as a rule, by every practitioner. I do not use instruments in removing the local deposits at the first sitting, as a rule. I first obtain a sample of the patient's urine and examine it; in nearly every case it is acid. I immediately request my patient to drink from eight to twelve glasses of pure water—distilled or spring—every day. As there are forty ounces of water excreted from the body every day, if that amount be not taken into our systems we certainly can not remain healthy. At the first sitting I make an application of iodin, not a dilute application as recommended by the chairman, but the crystals of iodin, applying it until the gums are saturated and black. The iodin percolates through the gums and runs down between the gum and the tooth. The object is to reduce the inflammation, which extends all through

the alveolar process and peridental membrane. Therefore, the constitutional condition of this disease should be reduced, as well as the interstitial gingivitis. If the gums are very badly inflamed, on the second or third day I lance them. The object in using iodin the first day and dismissing the patient for two or three days is that great pain would be produced by attempting to remove the deposits at that time, owing to the sensitive condition of gums and the necks of the teeth, but by using iodin and waiting, the sensitiveness is reduced to a minimum. After three or four days the deposit is removed, and massage treatment taken up. I depend more on the massage of the gums after the blood-letting than on any other treatment. The stimulation is necessary. The massage brush can not be used too freely. By this means the gums are contracted tightly over the alveolar process.

The gums should be examined and restored to health just as much as teeth are prepared and filled. It is a part of our specialty to keep our patients' mouths in good condition, and the gums must be treated. Massage brushes that reach the gums must be used. By the stimulation which their use gives, a majority of the cases are restored to health.

Pyorrhea, which is secondary, in many cases will cure itself: after the inflammation in the alveolar process, and the gum tissue has been reduced, pus will cease to flow. If, however, it does not, the use of oil of cloves or cassia, or other stimulant, is all that is necessary. I wish to say a word in regard to acids, such as aromatic sulphuric, lactic, etc., which have been highly recommended. There is not a surgeon living who would make such an application to inflamed bone in any other part of the body. Alkaline substances should be the basis of all preparations for cleansing the teeth and massaging the gums. A wash does not accomplish the desired results in the mouth for the reason that patients swash it around and think that all parts are cleansed. Therefore, I have discarded it to a very great extent. A tooth powder or a paste containing an alkaline substance is certainly more beneficial. I have been very successful in the use of a preparation that Dr. Fletcher has recommended, having used it for the last year. I consider it as being one of the best tooth powders.

DR. WILBER F. LITCH, Philadelphia—Interstitial gingivitis has been termed essentially a filth disease. I should call it a disease of functional and organic inertia, of which filth is one of the manifestations. In my experience it is a disease which arises chiefly in persons of sedentary habits, who live on a diet in which the proper balance is not observed between the needs of the system and the amount of fuel or food taken to supply it with vital energy; the result is faulty metabolism, and the accumulation in the system of those toxic principles to which Dr. Salisbury has called our attention.

Personally, I have very little faith in the permanently curative power of systemic medication in that class of cases, but rely on a proper regulation of diet, active exercise, and the cleansing and eliminative power of such natural agencies as copious draughts of pure water. The large amount of water which Dr. Talbot recommends, and which I presume he succeeds in getting his patients to imbibe, I find to be rather in excess, perhaps not of the needs, but of the capacity of the average patient. A good rule is to drink all that can be taken without interference with the digestive powers of the stomach. I find that water when heated is most eliminative in its character, and when taken half an hour before meals has a very stimulating effect on the kidneys and other excretory organs, while it does not cause the same gastric disturbances which a large amount of cold water will, especially when taken with meals.

The plan of local treatment recommended by Dr. Fletcher, proceeding from tooth to tooth, and removing as much as possible of all deposits in every case, is based upon sound principles. He does not claim to be always successful. There are certainly many cases where it seems to be impossible by ordinary mechanism to remove every vestige of calcareous depositions. In such cases we can only do the best we can and strive to do our work thoroughly. I agree with Dr. Fletcher that after one thorough local medication it is best not to meddle too much. Meddlesome surgery is bad surgery. Give nature a chance. The powder he recommends I have not had an opportunity to test personally, and I confess to being prejudiced against starchy powders of all kinds, and to a preference for alkaline powders, such as precipitated chalk and magnesia, even though slightly abrasive. Undoubtedly many of our powders have been too abrasive in character, owing not only to the nature of their constituents, but to the manner in which they are used. Friction should be employed with the brush alone, to be followed, after thorough rinsing of the mouth, by the powder applied lightly and chiefly as an antacid. I find the wooden toothpick objectionable for interspaces difficult of access, as between the molars. There is no flexibility in the ordinary wooden toothpick. Often by its use the gum is pushed away from the teeth to a destructive extent. I recommend the quill pick in all cases. An excellent agent for the removal of substances between the teeth is a strip of rubber. This being thin will pass between teeth which are in very close contact, and if the strip is broad, will wipe off deposits and remove foreign material much more effectively than floss silk. It is the difference between cleansing a surface with a thread and with a cloth.

DR. A. E. BALDWIN, Chicago—It is important to present the reasons for and against considering this disease, constitutional or purely local. It is impossible at this date to decide definitely whether it is clearly proved to be either one or the other. Many cases seem to be clearly of constitutional origin, and in others constitutional conditions clearly aggravate the trouble. I am opposed to the use of wooden toothpicks, and I think, though Dr. Fletcher considered lightly the consequences of splinters being left in the gums, that they do cause trouble and would better be avoided. I find the use of little rubber bands, which are so common, is worthy of trial. My patients use them and I find they keep the teeth clean, even better than floss silk. In regard to the autointoxication spoken of in the scholarly and interesting paper read by Dr. Salisbury, it seems to me it was practical to condense the subject for consideration. There are two thinks to which especial attention should be paid promptly. Of course, Dr. Salisbury goes into details further than I can in regard to the chemistry, the materials and the conditions, but the two things to be done, as far as possible, are, 1, to lessen the cause, and 2, do all possible to stimulate the excretory organs.

I do not agree with Dr. Talbot in discarding mouth washes. I favor the use of a good local wash. Dr. Talbot stated that after the termination of the local conditions, the treatment of pyorrhea would be very slight. In case all accretions are removed, and the parts restored to a natural, healthy state, the disease will cure itself; but to bring this about the whole system must be brought to a state of health. We are learning every day that the body is one organization and that the organs are dependent upon each other for well being.

DR. E. A. BOGUE, New York—Dr. Baldwin has just announced what I have been learning for some years, that all vital processes consist of a balance, and when that balance is disturbed there is disease. Dr. Salisbury, in his paper, came perilously near to another thought that has been announced as a fact, and is only a little way off from the subject under discussion; you will, perhaps, allow me to allude to it. The liver, in its process of disposing of sugar that has been taken with food, or of sugar formed in the stomach, succeeds much of the time—it is claimed most of the time—in sending a quantity of the sugar even so far as to show itself in the saliva. I mention this because in the treatment of pyorrhea I think it is an element which should be considered. If the physical system is in good condition, there is very little of this disease, very little dental disease of any kind. A few years ago I had occasion to examine the mouth of a gentleman 52 years of age. After searching an hour and a half for the cause of the trouble I discovered pyorrhea between the upper right wisdom tooth and the second molar. I also discovered a cavity at a point where the dentist had filled between the teeth. I was told by the gentleman that he never had a tooth-brush in his mouth. You would naturally expect that I found a filthy, dirty mouth, but I found a mouth as clean as the mouths of any of us in this room. The causes of this have been alluded to. He was in absolute health. His occupation was that of a railroad contractor. He lived out of doors on coarse food,

largely bread and meat. He used water as a drink and rinsed his mouth with two to four glasses of water after every meal. The consequence was, he was in good physical health, his teeth were well formed and well placed, and they were practically self-cleansing. The gums were in good condition, for they got a certain amount of the bruising or exercise which is needed by the human animal to keep him in good condition. What he took served as his medicine. He was regular in his habits, and was one of the finest specimens of the human being I have met in civilized society.

From that, I learned, among other things, not to use powder as my friend, Dr. Talbot, for the presence of the insoluble, mechanical, and abrasive in direct contact with the margin of the gums would serve as a nucleus for a deposit of those various pathogenic bacteria which are always found in the mouth. It is not easy to secure a soluble powder, though the S. S. White Dental Manufacturing Company have advertised one, which I have found was not soluble. Sugar of milk will dissolve, and perhaps that is the least deleterious of the soluble powders. On the other hand, it has seemed to me the amount of friction this gentleman gave his gums by his hard food was sufficient to keep them in good order. In the treatment of pyorrhea I should proceed differently from the treatment described by Dr. Talbot. I first use iodin and zinc to relieve the pain and then immediately proceed to remove all deposits. The aqueous solution of iodin and zinc I use is prepared as follows: Zinc sulphate as much as will dissolve in cold water. Dissolve 1 ounce potassium iodid in 2 ounces of water and add as much iodin in crystals as it will take up, then take equal parts of the two solutions and put them together. This will make something that is most efficient in the treatment of these conditions and which I have used with great delight to myself and to my patients.

DR. W. E. WALKER, Pass Christian, Miss.—I wish to give a word of testimony in favor of the stiff brushes, for I knew many practitioners who used soft brushes as I was taught. Ten years ago I ceased to recommend powders, and dropped them, as I found my patients would depend too much on the cleansing action of the powder and too little upon the brush. For the last five years I have given them the stiff brush alone, insisting more and more on its being used on the gums, as well as on the teeth. I use only the stiff brush and water. I find in the treatment of interstitial gingivitis that the patient gets better proportionately with the stiffness of the brush, as the massage of the gums by the brush is the important point.

DR. G. V. I. BROWN, Milwaukee—I am glad to see the discussion brought into the course of autointoxication. For practical purposes I do not think it advisable to go too far afield to find, in the majority of cases, what lies very near. If the rest of those present were surrounded as I am every day in the hospital with the giving of drugs, perhaps they would appreciate that all things are seldom what they seem. I have not much faith in the administration of drugs, strictly speaking, for any of these purposes. I believe in the stimulation of the glands for a time by the administration of drugs, but a considerable portion of the effect is necessarily lost after a few administrations. There is danger of an effect, which perhaps you know not of, being started up, possibly to counteract the very thing you are striving for. Such remedies as suggested, namely, of drinking water, and remedies that are applied directly to the surfaces affected, are undoubtedly safe. They promise a better result in long-continued use than would be obtained by internal administration of drugs for the specific purpose of stimulating any organ of the body.

One view of this matter has been overlooked. We have been describing here interstitial gingivitis, a condition of the gums and alveolar sockets which most resembles what we find resulting from the administration of many drugs mentioned in Dr. Baum's paper. How many of you have known in any part of the body an atrophy by reason of imperfect action of any of the organs, provided the part itself was properly used and kept in a reasonable state of health? When the gums are swollen, when gingivitis is present, there is a condition which accounts for destruction of tissue, but remember there are many cases in which there is gradual absorption of the alveolus surrounding the root, and a gradual contraction of the gum after many of these diseases. I would like somebody to account for this as a result of autointoxication. There is a stage of the subject which Dr. Talbot alluded to when he spoke of the frequency of pyorrhea among neurotics. This is accounted for in many ways, but before closing I want to call your attention to a condition which I have in mind. Take a child suffering from contraction of the spleen, due to a rickety condition. Does anybody believe that the administration of any of the drugs which is understood as valuable to overcome the disease, would cure the condition? Can the weight of the body bearing more on one side be remedied by the use of drugs? The part of the weight of the child will have to be relieved by properly supporting it, before we locally obtain the condition required. It does not follow that our tissue will be remedied by drugs, applicable to that disease. The same is true of pyorrhea. The restoration of a broken limb, or anything in surgery to health depends on granulation, and on the supply of new cells to take the place of those destroyed or lost. This can not be obtained while there is motion. The patient must be in condition so that nature can restore the integrity of the tissues.

I think it a fair proposition to say that if any one will show me the occlusal surfaces of the teeth, I will tell him whether there is pyorrhea and where the pockets are; on the other hand, if I see the pockets, I can tell how the occlusive surfaces are worn. In every case, absolutely and inevitably that condition is a factor. It may not, however, be an etiologic factor. There is an opposite condition, the result of this continued irritation. In this inflammation which goes on around the teeth in pyorrhea, a destruction of the tissues results.

I have here a microscopic slide of a tooth which is characteristic of that class. Such cases are usually accompanied by great pain. It is true in many instances, more than are realized, that pyorrhea is the cause of chronic neuralgia. There is very little pain in pyorrhea except from some of the symptoms which become complicated. It is a slow process, a gradual liquefaction and destruction of the tissue.

DR. M. I. RHEIN, New York—The various papers of this symposium which I have heard have given me personally more satisfaction than any discussion of this subject I have ever listened to at any gathering. The fact, that we have been able to listen to a series of papers which recognize the constitutional variety of exciting causes that may produce autointoxication is a point gained for which this section ought to very heartily congratulate itself. My own position in regard to this matter is very well known to most of the members. As far back as 1894, before the American Dental Association at Old Point Comfort, I introduced an etiologic classification of the exciting causes of interstitial gingivitis or pyorrhea alveolaris, and the classification I gave there is one that has been closely followed to-day by various papers, especially by Dr. Talbot, and in the constitutional treatment as outlined by the very admirable paper from Dr. Salisbury, who practically follows in the line of the etiologic conclusion I presented on that occasion. I feel more than gratified to see so much unanimity manifest at this meeting on this point. It has long been evident to me, that a symptom of various systemic disorders can not be discussed intelligently, unless that scientific point is reached, so that when an isolated case is discussed the etiology of the particular case is brought out, and an attempt is not made to have a universal panacea for the treatment of a symptom that may arise from many different causes or follow many different diseases. I have been intensely interested in Dr. Salisbury's line of thought. I believe this paper one of the most valuable presented at this meeting. I do not wish to say anything against the criticism Dr. Brown has presented in regard to too much materia medica in constitutional treatment, but so long as the acute stages of a trouble are met and they have to be treated, there must be more or less reliance on the pharmacopeia for alleviating the acute manifestations. In regard to the local treatment, I wish I had the time to go into the matter at greater length. There is a point Dr. Talbot raised about the application of iodin, and the preliminary diagnosis of the general condition of the patient. It is one in which I heartily and thoroughly coincide, more especially in the value to be obtained in forcing the iodin down into the alveolar socket itself, not only in the peridental membrane. I would say that

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for that purpose I have put the greatest trust in using a saturated solution of iodin with cataphoresis, using the negative pole in order to force it through the tissues. In this way I have obtained the same constitutional conditions and diminished the inflammatory, so necessary before active operations are undertaken. It is my firm conviction that if such conditions are properly treated it is necessary to give more attention to the local condition. I refer now to the keeping in absolute hygenic condition all the teeth of our patients. For my part, I have found it impossible to give the time necessary, and I have for years trained a female assistant, who devotes her entire atention to the cleansing of individual teeth. I agree thoroughly in the idea that only one, or two, or three teeth ought to be cleansed at a time, and not attempt to cover too much surface. Following this method, I feel at the present moment that my patients can have their mouths kept in the hygienic condition all the teeth of our patients. For my part, only if sufficient dental attention is given. I can not imagine any one present who is able to take the time which is necessary to do this work effectively. I throw this suggestion out for the benefit of those who have not already adopted such a plan. I am able to keep a young woman busy at nothing else but this one particular thing, and she has trained her fingers so well in this that I have many of my friends, my professional colleagues, come to her for this work because she has become so adept with an experience of seven or eight years.

DR. E. S. TALBOT, Chicago—Dr. Brown brought up one point not down on the program, and that is natural absorption. I believe that in the evolution of man the absorption of the second set of teeth is in accord with the process. In the lower vertebrates there is a succession of teeth. When one set has done its work it is lost and a new set takes its place; this continues throughout the life of the animal. Advance in evolution finds man with only two sets of teeth. Natural absorption takes place in every individual. This absorption is called osteomalacia. It takes place in the lower animals such as carnivora, monkey, horse and cow. The alveolar processes being transitory structures, disease of any kind due to trophic changes is liable to produce absorption. This may take place in children as young as 12 years, as I can prove by photographs and skulls in my possession.

DR. G. V. I. BROWN, Milwaukee—If the teeth came together so that there would be no motion, there would be comparatively little pyorrhea. When the occlusal surfaces are such that there must be a slight adjustment of the position of the teeth, every time the mouth is closed, the slight movement constantly repeated causes inflammation and a series of disturbances which develop the disease.

DR. J. H. SALISBURY, Chicago—Dr. Litch stated that he had difficulty in getting his patients to drink the amount of water Dr. Talbot prescribed. That may be due, in some cases, to the fact that the water is retained in the stomach, and so causes disturbance. Absorption of water from the stomach is practically unnatural, and if for any reason the stomach does not empty itself water will remain there and give more or less trouble. That failure to empty itself is due to the fact that the intestines are full. In that case it would be desirable to see that the intestines are emptied at proper intervals. Constipation in some cases may be the cause, or in other cases it may be due to dilatation of the stomach and causes which prevent the passage of liquid from the stomach to the intestines.

The criticism raised in regard to the continued use of drugs arose from a misconception. The continual use of drugs was not advocated. It was not at all necessary to use them but for the purposes of arousing the various organs to activity; as for instance, to empty the intestines a cathartic or two or three doses would be very desirable, but in general natural means to stimulate the powers of the system should be depended on, rather than the action of drugs. As a general practitioner, I am much interested in this question, not only from the standpoint of etiology, but also from the impression that it is a matter of vital importance. The profession should understand the possible deleterious effects upon the general system of a continued swallowing of food and mucus laden with pathogenic organisms derived from the teeth. Both the medical profession and the laity should be impressed with the very serious importance of attending to this matter, that no very serious changes take place in the stomach, and consequently in the blood.

CEREBRAL LOCALIZATION.*

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Fifty years after Gall had published his doctrine of cerebral localization, the scientific medical world still believed with Flourens that "not only did all perceptions, all volitions, all intellectual faculties, reside exclusively in the brain, but that all faculties occupied the same place in it. That as soon as one of them disappeared from a lesion of any one point of the brain proper, they all disappeared; that as soon as one returned after the healing of that lesion, all returned. That the ability to perceive and to will, therefore, constituted essentially but one faculty; and that that faculty resided essentially in a single organ." Again fifty years had elapsed and a chart of the surface of a brain could be fitly compared to "a political map of Germany at the end of the seventeenth century." So greatly has our knowledge of cerebral localization advanced in those years that it seems impossible to give more than a most cursory review of what is known, in the course of one evening. Many important and interesting theoretical considerations will necessarily have to be neglected entirely.

We will begin with cortical localization, that part of our subject which is probably of greatest importance from a clinical point of view. The region of the surface of the brain which has been studied most carefully, and about which we consequently know most, is the motor, or Rolandic, area. That portion of the brain which lies anteriorly to this, the so-called prefrontal region, appears to be the seat of the highest mental processes. Its destruction is said to annihilate the power of directing one's attention entirely when the lesion is bilateral, while a unilateral lesion often causes only a transitory mental change. Mental weakness, loss of memory and attention, apathy and childish behavior are common symptoms. A tendency to indulge in rather stupid jokes, the "Witzelsucht" of German authors, is supposed to be particularly characteristic. In irritative lesions Flechsig claims boundless delirium of grandeur and its reverse in the early stages, later on complete apathy and loss of judgment to be particularly frequent. Bruns has taught us that pathologic processes in this region may cause ataxia of the so-called cerebellar type.

Before we enter into the study of the motor region of the brain a few general remarks about cerebral centers and brain palsies may not be out of place. These so-called centers are in all probability not mathematical points, nor even spaces with sharp boundary lines, but rather diffuse areas which perhaps differ somewhat in extent in various individuals. It is, of course, known to all of you that each hemisphere influences in the main the muscles of the opposite side of the body, a point to which I shall return presently. Some centers, however, control muscles on both sides of the body equally, such as the orbiculares oculi, the muscles of mastication, of the larynx, pharynx and to a lesser extent some other ones. Irritative lesions in these may, therefore, cause bilateral spasms, while paralysis is found only

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when the center is destroyed in both hemispheres of the brain. In older literature there are quite a large number of cases recorded in which spasms or paralysis were found on the same side as the brain lesion. Nasse has collected no less than 58 of them, but on account of the unsatisfactory histories and uncertain methods of microscopic examination they are of very doubtful value. There are, however, some more recent observations to which these objections do not apply. One of these I had occasion to watch for some months; it was later published by Dinkler. Here, an immense tumor had destroyed practically all of one hemisphere, and it was in all probability the pressure upon the opposite hemisphere which was responsible for the existing spasms.

Another instance of even greater interest is that reported by Dr. Bidon and quoted by Charcot and Pitres. In this case there was hemiplegia affecting the left side of the body, with complete motor aphasia. The postmortem showed softening of the lower half of the left Rolandic area and the foot of the third left frontal convolution, and the microscopic examination revealed secondary descending degeneration in the left cerebral peduncle and the left anterior and lateral columns; there was no trace of decussation of the pyramids. That cerebral centers may migrate from one side of the brain to the other was at least made probable by an observation of Oppenheim. His patient had been right-handed up to the age of 17, when an injury to the right hand compelled her to learn to write with the left one. When at the age of 59 a tumor developed in the right hemisphere, it caused left hemiparesis with aphasia. Bramwell has reported a somewhat similar case in an old man.

Since the so-called psychomotor centers are distributed over a relatively large area of the cortex supplied by a number of small arteries, superficial lesions cause monoplegias more often than hemiplegias. On the other hand, monoplegias due to destruction of the white substance of the brain are rather rare, a point which may at times be of considerable value in determining the exact location of a pathologic process.

Cerebral hemiplegia, whether it be due to a superficial or a deep-seated lesion, never means a complete paralysis of one-half of the body. Those muscles which we habitually use together with the same muscles of the opposite side are affected only to a slighter degree. Thus we find paralysis of arm and leg, together with paresis of the lower part of the face, slight weakness only in the muscles of the tongue and trunk, excepting the trapezius, and no demonstrable loss of power at all in the muscles of mastication, articulation and those of the eye. Since we use both legs simultaneously more often than both arms, the weakness is usually more pronounced in the former than in the latter. Paralysis of cortical origin is flaccid in the beginning, and presents late contractures due to secondary degeneration in the pyramidal tracts.

We will next consider the distribution of motor centers in the so-called Rolandic area, which extends over both central convolutions and the paracentral lobule, to a lesser extent into the frontal convolution and the superior parietal lobule. The muscles of face and tongue, and probably also those of mastication, are represented in the lower portions of both, principally the anterior, central convolutions. The upper extremity occupies about the middle one-third of these same convolutions, extending further up anteriorly than posteriorly, while the upper one-third, as well as the paracentral lobule, and probably part of the superior parietal lobe, control the movements of the lower extremities. Experiments on animals, in part verified by clinical experiences, have taught us a great many details, which you will find on charts in any modern text-book on nervous diseases. I shall mention only a part of the more important ones here.

While monoplegias of cerebral origin affecting only the leg are relatively rare, they have been bilateral in a rather large percentage of the cases recorded. The proximity of the two paracentral lobules explains this rather interesting observation. Charcot has claimed that tubercular lesions have a special tendency to attack the leg center. A curious fact, for which there had been no satisfactory explanation for many years, is the apparent immunity of the upper branch of the facial nerve in cerebral hemiplegia. It was thought that for this portion of the facial nerve a separate cortical center must exist, and Exner and Paneth claim to have located it in animals in the gyrus angularis. A more probable explanation for this immunity has already been given. The muscles supplied by that nerve belong to those which are generally used simultaneously on both sides of the body, and, therefore, each cerebral center very probably controls both upper facial nerves. Paralysis could, therefore, occur only when both cortical areas are destroyed. Furthermore, recent pains-taking investigations by Mirallie have shown that "in every case of cerebral hemiplegia in which the lower facial is paralyzed, the upper branch of that nerve is also affected, but to a lesser degree than the lower branches or than in peripheral facial paralysis."

The cortical center for the muscles of mastication has been located in a number of animals, the dog, ape and rabbit, but, as far as I am aware, there are no clear cases in the human being on record to verify these observations.

The same applies to the center for the rotation of the head. We know where to find it in animals, but are uncertain about its exact location in the human brain.

The cortical center for the larynx was first demonstrated in cats by Ferrier in 1873. His conclusions were confirmed by experiments made on dogs by Soltmann, Krause and Duret, and on apes by Masini and Semon and Horsley. It is in all probability bilateral in man, and located at the lower end of the Rolandic area, in the immediate neighborhood of the centers for speech and face. Cases in the human being verifying these experiments are very rare, and, therefore, one which I have under observation at present may be of some interest. The patient is a man, 45 years of age, who had been ill for one week when he first consulted me. He complained of headache, and stated that about every half hour he had a peculiar attack, during which he suffered from "sticking pains" and a "shaking sensation" in his throat, and was unable to utter a sound. The examination of the central nervous system revealed no objective signs of disease, but there was marked enlargement of all superficial lymphatic glands. At that time the patient denied syphilitic infection, but later acknowledged that it occurred about one year ago. Two laryngologists examined the patient, and could find nothing to explain the laryngeal spasms, from which the patient evidently suffered. He was put on iodid of potash, and after about one week reported that he was worse. I then for the first time could witness one of his attacks. It consisted of a marked laryngeal spasm, followed by aphasia, which lasted but a very few minutes, but recurred frequently. He was sent to the Michael Reese Hospital, and there developed clonic spasms of the right side of the face, which usually followed the

laryngeal attacks and a more permanent motor aphasia. Dr. Hale, who kindly examined the fundus for me, found optic atrophy on both sides. Under vigorous antisyphilitic treatment he improved considerably, was discharged, but returned after about two weeks, complaining of weakness in his right arm. This gradually increased and spread, until now the patient has a right hemiplegia with complete motor aphasia, which does no longer yield to antisyphilitic treatment. He is sinking rapidly, and will probably die within a week or so.[1]

While we are discussing the centers controlling the voluntary muscles of the body, it may perhaps be opportune to say a few words about that most important group of symptoms due to cortical lesions, Jacksonian epilepsy. It appears that quite a number of physicians even to-day consider every localized spasm of an organic nature to be cortical. That is certainly not correct. The true Jacksonian epilepsy is characterized by a number of features which occur but very rarely when other parts but the cortex are irritated, so that if we only know what constitutes an attack of Jacksonian epilepsy we will seldom err in basing our localization upon its presence. The convulsion proper is almost always—Grasset even claims invariably—preceded by a brief tonic spasm, then we see a series of clonic contractions, beginning in an isolated group of muscles, to which it either remains confined, or else it spreads progressively to adjoining groups of muscles, or may involve all of one-half of the body, or even become generalized. The convulsions hardly ever last more than five minutes, and are followed in the part first affected by a feeling of great lassitude, or even by a paresis, which latter persists for some hours, a few days, rarely for a longer time. With each successive attack this paresis becomes more intense and lasts longer; in rare cases we see post-epileptic contractures. The convulsive period is followed in the more severe cases by post-epileptic stertor, or sleep, usually shorter in duration than in so-called idiopathic epilepsy. Other post-epileptic symptoms are delirium, headache, amnesia, vertigo, vomiting, transitory aphasia, hemianopia or myosis. The sensibility usually remains intact. In rare instances, particularly when a syphilitic lesion causes the attacks, we find patches of anesthesia, most commonly on the dorsum of the hands, the outer side of the hips or the forearms. Charcot, Bourneville and others have reported cases in which the spasm consisted of tonic contractions only.[2] A glance at a chart in your text-books will show you in what way Jacksonian epilepsy may spread. The following sequence is most often seen: Face-tongue, face-arm-leg, arm-face-leg, leg-arm-face. The spasms could never jump from face to lower extremity without affecting the arm also, as the center for the latter lies between those of the two former.

Just as in idiopathic, we at times see epileptic equivalents in the Jacksonian form of epilepsy, which may either alternate with the convulsive attacks or may take their place altogether. One case of the latter type, which I saw some years ago, I referred to briefly in a discussion on epilepsy last year. Here, attacks of visual hallucinations were the first sign of a brain-tumor. In other cases these equivalents consisted in attacks of vertigo, so-called "absence," hallucinations of sight, hearing or of the olfactory sense, localized parethesiæ or sudden, impulsive acts. Attacks of migraine ophthalmique have been described; according to Féré they consist of two phases, that of excitation, in which violent circumscribed headache, vertigo, vomiting, convulsions, scintillating scotoma are noted, followed by a period of exhaustion, comprising hemianopia, somnolence, and at times aphasia and hemiplegia.

Such attacks are, as I have already stated, very rare, excepting in cortical lesions. They have, however, been seen in disease of the centrum ovale, the internal capsule, striated bodies and optic thalamus. They occur most frequently in limited lesions, which develop actively and progressively, such as neoplasmata, encephalitis or meningitis. It is not necessary for the pathological process to have its origin in the motor area proper, or even in its immediate neighborhood, as long as it causes irritation of those parts. The existence of paresis, or paralysis, makes it probable that the motor region proper is affected; absence of loss of motor power that the lesion is either very superficial or only in parts near the psychomotor centers. The early occurrence of headache points to a disturbance near the surface—irritation of meninges—a sign of considerable practical importance.

The points which are valuable in differentiating Jacksonian from idiopathic epilepsy are the following: The spasm is limited in the beginning of the attack; loss of consciousness occurs late, if at all; the epileptic cry, fall and biting of tongue are usually absent; the post-epileptic coma is slight, of short duration or entirely absent; in the so-called *etat de mal* there is no rise of temperature; finally the history of the case, in particular the age at which the first attack occurred.

Common or tactile sensibility is supposed by some authors to be localized in the psychomotor area. Some even go so far as to claim that destruction of these parts does not cause any disturbance of motility primarily, but only in so far as disturbances of sensibility interfere with the voluntary use of our muscles. Others again claim that the motor and sensory centers are distinct and separate. One of the latter group, Ferrier, has collected 284 cases in which paralysis was caused by cortical lesions, and has found that in 100 of these nothing was said about the condition of sensibility, that in 121 it was found intact, and in the remaining 63 affected. Counting only those cases in which the condition of sensibility is mentioned—and it seems extremely probable that in some of the first 100 it was not mentioned, because intact—we would find it normal in about two-thirds of all cases. Where anesthesia does exist, it often does not correspond in extent to the area of paralysis, and is usually more transitory. This has induced Charcot and Pitres to conclude that in most cases of anesthesia with cortical hemiplegia the former is purely functional, "analogous, if not identical, with hysterical anesthesia," just as we see a purely functional loss of sensibility in organic paralysis of spinal or peripheral origin. (Erb's case of progressive muscular atrophy, Gowers' case of peripheral facial paralysis, etc.)

Goltz has found that in dogs even the ablation of an entire hemisphere causes only hypesthesia, not anesthesia, and he himself admits that this may possibly be due to destruction of fibers below the cortex.

Horsley found that when parts of the motor cortex were removed in man slight loss of tactile sensation, difficulty in localization stimuli, and loss of muscular sense resulted. Most authors, I believe, concede that the latter, the muscular sense, is most intimately associated with the Rolandic area, but it can not be denied that

[1] The patient has since died. No additional symptoms of any importance developed, excepting that just before death the temperature reached 108. Unfortunately we could not make a post-mortem examination.

[2] Other types of epilepsy may of course occur in cortical lesions, but they are not characteristic

even it may remain intact when the cortex is destroyed by disease. Ferrier has sought for another localization of common sensibility, and claims to have found it in the hippocampus major and gyrus fornicatus. Observations in the human being, tending to prove the correctness of his views, are not known to us. The entire problem of cortical localization of sensibility, you see, still remains to be solved.

One of the clinically most important centers of the Rolandic area we find in the posterior of the third left—in right-handed persons—frontal convolution, the seat of the faculty of articulated speech. Its destruction deprives the individual of the power of speech, with conservation of the faculty to understand, read and write. Broca is generally thought to have discovered this important fact, while in reality he was only one of several, each of whom contributed his share. When he published his first "memoire" he did not, apparently, know that this center was found in the left hemisphere only, a fact which had been noted by Dax twenty-five years before; but the most important work of the latter had been noticed by few, so that Broca received all the credit. In about the same region, as nearly as we can locate it to-day, is the center for musical expression, which, however, may remain intact in cases of motor aphasia. Lesions in the second left frontal convolution probably cause agraphia, i. e., loss of the memory for written images. On account of the proximity of this center to Broca's convolution, motor aphasia and agraphia are very often found in the same case.

Some authorities have claimed to have found other centers in the motor area, but their observations are all lacking convincing confirmation. Thus, Herrington claims to have located a center for the contraction of the sphincter ani in the paracentral lobe, while an area controlling movements of the bladder is supposed to be located in the front part of the gyrus sigmoides. According to Raudnitz, stimulation of the vasomotor centers in the Rolandic region decreases the temperature in the corresponding extremity, while destructive lesions cause the opposite effect.

Unverricht and Preobraschewsky claim to have found a center controlling respiration near the fissure which separates the second from the third frontal convolution.

About the symptoms caused by disease of the cortex of the insula we know practically nothing. Perdrier states that they consist in paralysis of arm and leg, without involvement of face or trunk, that the paralysis is very much more marked in the upper than in the lower extremity, that it is flaccid, without contractures, is neither accompanied by disturbances of sensibility, nor by any characteristic changes in cutaneous or deep reflexes.

Parietal lobe.—The most important portion of this lobe is the gyrus angularis. It appears to have some relation to our visual apparatus. Irritative lesions occasionally give rise to optical illusions or flashes of light, followed by temporary amblyopia, while destructive pathologic processes, more particularly in the left hemisphere, usually cause word-blindness. Bruns calls attention to the occurrence of hemi- or mono-ataxy in lesions of the parietal lobe and believes with many other observers that this part of the brain is intimately associated with the muscular sense.

It is possible, though not proved definitely, that centers for the movement of the eyeball and upper lid may be in this region. Charcot and Pitres publish an interesting case in which a small focus of superficial hemorrhagic softening in the inferior parietal lobe caused ptosis. But Surmount has collected 61 cases of disease in the parietal lobe, in only 11 of which ptosis had been found. Conjugate deviation of the eyes and the head is also supposed in some instances to have been due to lesions in this region. But it is a rare symptom, occurs most frequently in cases of general meningitis, and is usually transitory in hemiplegias, so that we have few data for definite localization. It may also occur in disease of the mesencephalon. When it is cortical in its origin, the patient is said to look toward the convulsed extremities in case of irritation; at the lesion, in case of destruction, a law which is exactly reversed in case the mesencephalon is affected.

The cortex of the occipital lobe contains the visual centers. Their exact location is still somewhat doubtful. The symptoms characteristic of cortical lesions in this region are the following: The visual disturbance is homonymous, there are no ophthalmoscopic changes—unless due to increased cerebral pressure—the pupilary reflexes remain intact, even if a pencil of light be thrown upon the blind half of the retina only. Visual hallucinations or scintillating scotoma frequently precede or coexist with the hemianopia. It is claimed by some that in the occipital lobe are to be found the psychomotor centers for the eye-muscles and that lesions limited to its anterior portion may cause color hemianopia.

In the temporal lobe we find the auditory centers. Destruction of the left superior temporo-sphenoidal lobe causes loss of the auditory images of words, word-deafness; destruction of both temporal lobes total deafness, while irritative processes in the superior temporo-sphenoidal gyrus often give rise to auditory discharges and subjective auditory sensations, so that a spasm which begins with an auditory aura always suggests that localization.

On the lower surface of the brain are supposed to be centers of the olfactory and gustatory senses, on the region of the gyrus uncinatus. Whether the fibers preceding from them cross or not has not been ascertained definitely; for those of the sense of smell it seems very improbable.

If the large mass of white matter under the cortex is the seat of disease there may either be no focal symptoms at all, or else those of a cortical lesion or of one in the internal capsule, according to the seat of the pathologic process. Jacksonian epilepsy, however, is but rarely met with.

In the capsula interna motor and sensory tracts lie closely together, so that hemiplegia and hemianesthesia must occur in extensive lesions. The order of representation of movement is from before back: opening and turning of eyes, opening of mouth, turning of head and eyes simultaneously, turning of head alone, moving of tongue, of angle of mouth, of shoulder, elbow, wrist, fingers, thumb, hip, ankle, knee, hallux, toes. Back of the motor tracts are the fibers conducting sensibility. The group of symptoms which is characteristic for disease of the internal capsule is hemiplegia with hemianesthesia including hemianopia, but without disturbance of the pupilary reactions to light. This hemiplegia differs from that due to cortical lesions in this, that the loss of sensibility is often not only more pronounced, but also more permanent, that all qualities of sensibility are usually affected and that all of the mucous membrane with the exception of part of that

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of the eye may be anesthetic. Hearing, smell, taste often suffer as in hysteria. Post- or pre-hemiplegic hemichorea or hemiathetosis are almost pathognomonic of disease in this region. Grasset has also observed hemiataxy. In most of the cases in which intense neuralgiform pain occurred on the paralyzed side, the internal capsule or its imediate neighborhood was the seat of the lesion.

About the functions of the optic thalami but little is known. They are supposed to control to some extent mimic expression; so that destructive lesions would cause loss of this function, while irritative lesions may cause spasmodic crying and laughing, particularly if situated in the anterior portion of this ganglion. In most cases the symptoms will be about those just described for disease of the internal capsule and due to involvement of these paths: hemiplegia, hemianesthesia, hemichorea, etc. A very pronounced atrophy of paralyzed muscles, developing rapidly with quantitative and qualitative changes in their reaction to the electric current, was supposed by some to indicate trouble in the optic thalami, but the same phenomena have been seen in disease of the cortex.

Destruction of the striated bodies causes no focal symptoms as far as we know. These ganglia are said to contain thermic centers, but as there are some in other parts of the brain, we can not utilize this fact in localizing.

The diagnosis of a lesion in the corpus callosum is also usually impossible. The following signs are supposed to be of some importance in case of tumor:

1. The existence of symptoms of an organic cerebral trouble which develop slowly and increase constantly in intensity.

2. Hemiparesis, usually combined with more or less weakness of the opposite side of the body.

3. Very pronounced dementia, which contrasts strikingly with the insignificance or total absence of the so-called general symptoms of tumor—headache, vomiting, convulsions, optic neuritis.

4. Existence of dysarthria.

5. Absence of any symptoms suggesting any other localization.

Of these diseases which may affect the lateral ventricles directly we can recognize with some degree of certainty only hemorrhage. Its onset is naturally very sudden and violent, the coma is very profound from the beginning, convulsions and contractures are frequent, while paralysis is in some cases entirely absent, in others general. Vomiting is relatively infrequent. Recovery is rare; in the majority of instances the patients died within a few hours.

The symptom which characterizes disease in the region of the third ventricle is the nuclear ophthalmoplegia. The nuclei of the eye-muscles are arranged so that the cells for the ciliary and sphincter iridis muscles are placed anteriorly, those of the trochlear and abducens nerves posteriorly. If an ophthalmoplegia is bilateral and affects all ocular muscles, whether they be paralyzed or only paretic, it is almost certainly nuclear in its origin; the same symptoms may occur, but are very rare in lesions at the base. If an ophthalmoplegia is unilateral and affects all muscles of that one side it may be due either to disease in the region of the third ventricle or to some disturbance at the point at which the nerves enter the orbit, more probably the latter, and then often combined with some degree of exophthalmus.

The cerebellum is relatively often the seat of disease. Tumors, particularly tubercles, are often met with in children, and sarcomata and cystic growths are not at all rare. The most important topical symptom is the so-called cerebellar ataxy, a peculiar reeling gait, closely resembling that of an intoxicated person, with a tendency to fall toward the affected side. Another form of disturbance of co-ordination has been seen in some few cases of cerebellar lesions, an ataxy which differs in no way from that of tabes. Second in importance as a cerebellar symptom comes vertigo; it is true that a disturbance in almost any other part of the brain may cause this phenomenon, but in disease of the cerebellum it usually appears early and throughout the course of the malady remains a very prominent and annoying feature. Exactly the same is to be said of vomiting and headache. If a tumor, etc., affects only the cerebellum and not the neighboring parts there is no distinct paralysis, but a certain amount of weakness is often found in the extremities corresponding to the side on which the lesion is located. Some authors even go so far as to hold a paresis of the muscles of the trunk and legs responsible for the ataxy. In quite a few cases intention tremor of the upper extremities has been observed, the occipital region is often sensitive to percussion, and the knee-jerk is relatively often not obtainable. Paralysis of ocular muscles, paretic nystagmus, dilatation or immobility of the pupils, paralysis and anesthesia are very common, but they are due to pressure on neighboring parts, not to the cerebellar lesion proper. Formerly it was thought that the occurrence of cerebellar ataxy always meant involvement of the central lobe of the cerebellum, the vermis superior, but we know now that this is incorrect. I have myself seen a case in which an angiosarcoma had almost totally destroyed that part and there had never been any indication of inco-ordination.

Lesions in the anterior corpora quadrigemina may cause associated movements of the extrinsic ocular muscles, those in the posterior bodies paralysis of these muscles, particularly of the recti superiores et inferiores. The intrinsic muscles are often intact in such cases, as their nuclei are placed anteriorly to the parts we are now discussing. Ataxy, both of the cerebellar and the tabetic type, occurs frequently, particularly in the form first mentioned and in a few instances choreiform movements have been recorded. Deafness is rather a common symptom, crossed in unilateral disease. Whether the hemianopia which has been seen, is due to disease of the corpora quadrigemina proper or to involvement of the external geniculate bodies is doubtful; the fact, however, remains that it is a frequent symptom. It is thought by some that this region contains centers which control perspiration.

Disease of the hypophysis is thought to be the cause of acromegaly, although in some cases of this disease the pituitary body has been found intact. Only recently I saw a case of psammoma of this region with stunted growth and with but very few of the symptoms which are supposed to be characteristic for this localization. They are: Pain in the frontal and temporal region, shooting toward the orbits; early involvement of both eyes in form of an amblyopia with temporal hemianopia, followed later by so-called primary optic atrophy, paralytic squint, somnolence, weakness in the lower extremities, occasionally dementia and diabetes mellitus or insipidus.

If the crura cerebri are affected we most frequently find that type of alternating hemiplegia, which is known under the name of hemiplegia alterans superior, i. e., paralysis of the oculomotor nerve on one side, that of the

lesion, and of the muscles of the lower face and the tongue and the extremities on the opposite side. Ptosis is usually pronounced and often one of the first, if not the first, symptom. The intrinsic eye-muscles usually remain intact. In some cases paralysis of the extrinsic muscles of the eye has been associated with a tremor of the opposite side of the body, resembling either the intention tremor of disseminated sclerosis or that of paralysis agitans; in other instances the oculomotor nerve of one side and the contralateral facial—lower branches—have been paralyzed. Frequent micturition and incontinence have been noted in a number of cases. It is rather common to see the disease begin in one crus and spread to the other one.

Another type of alternating hemiplegia is seen, when the pons is the seat of a pathologic process. Here it is the facial on the side of the lesion and the extremities and hypoglossal nerve on the other side of the body that are affected. Paresthesia and anesthesia of the latter half of the body may or may not occur. Another form of alternating hemiplegia due to disease of the pons, but less frequent than the one just mentioned, is that of the abducens on one, of the extremities on the other side. Again, in other cases the abducens of one side and the rectus internus of the other one are paralyzed, so that both eyes are turned toward the seat of the disease. In a third, the rarest, form of alternating hemiplegia finally the trigeminus—its motor or sensory branches or both together—are paralyzed on one side, the extremities on the other. Occasionally we see trophic disturbances in the trigeminal region, such as neuroparalytic keratitis. The hearing is quite frequently affected to some degree, although complete deafness is exceptional.

It is a matter of course that various combinations of the types just described may occur and that such an alternating hemiplegia is possible only in unilateral lesions. It is needless to enter into a description of the symptoms caused by bilateral lesions; a moment's thought will show what they must be; but I might add that the nerves in the medulla oblongata are usually affected more or less, thus giving rise to the additional symptoms of bulbar paralysis, difficulty in swallowing, dysarthria, paralysis of soft palate, pharyngeal and laryngeal muscles. Among the rarer symptoms the following may be worth mentioning: Albuminuria, melliturla, polyuria, and very pronounced rise in temperature. Convulsions resembling those of epilepsy are rarely seen, but more tonic contractions, especially of the muscles of the trunk and neck are not uncommon. Choked disc usually appears very late in pontine lesions and there is but little disturbance of the intellect.

The medulla oblongata contains the nuclei of the ninth to twelfth cerebral nerves, sensory, motor and vasomotor paths and centers controlling the actions of heart and respiration. Hence lesions of this part cause partial or total deafness, paralysis of the soft palate and of the larynx, of the vocal cord, disturbance of cardiac action and of respiration, paralysis and atrophy of the tongue with dysarthria and paralysis of motility and sensibility in the extremities. Since the nuclei of these cerebral nerves are mostly placed close together near the median line, unilateral paralysis or alternating hemiplegia must necessarily be infrequent. Diabetes mellitus, polyuria or albuminuria are common.

This is rather a hasty and incomplete review of what is known of cerebral localization. I would add but one point, and that is in attempting to localize a lesion in the brain we should always be prepared for surprises. I have mentioned a few of the curious cases I have seen, such as the case with convulsions on the side of the cerebral tumor, the tumor of the hypophysis with stunted growth, and as a warning to those who would still be too confident of our ability to determine the seat of brain-disease would say that I have seen typical Jacksonian epilepsy on the same side of the body in which the disease was located in an abscess of the cerebellum.

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MEDICINE AND MEDICAL MEN IN THE UNITED STATES.

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NEW YORK CITY.

(Concluded from page 431.)

It is hardly necessary to say that for those of you for whom the practice of medicine is not only diagnosis and autopsy, but the treatment and cure of the patient in whose behalf a consultation is to be held, when medicinal treatment is in question you can not agree with a homeopath who is a Hahnemannian; and you do not want to meet a homeopath, who, because the name is still fashionable and for a portion of the misinformed public the subject of an almost religious fanaticism, employs that title for meretricious purposes. Still there are cases in which it would be inhuman to refuse a consultation in an urgent case.* Not only were such consultations held from olden times, but even in large cities, exceptions to the rule were always frequent, indeed too frequent in my opinion. Moreover, whoever is acquainted with smaller cities and villages, where a homeopath is the only rival or companion of the regular physician, knows that for either it would be suicidal to refuse a consultation. Only lately one of the medical men most widely known for his wisdom, in the AMERICAN MEDICAL ASSOCIATION and in the profession at large—Dr. S. C. Busey of Washington—proclaimed that the rule forbidding such consultations should be so modified or explained as to permit them in cases of emergency. This is exactly what the Medical Society of the State of New York made its official policy in 1882. We considered it more honest to admit by law what was constantly being done, and to decree precisely, that for reasons of humanity and in an urgent case a consultation should not be refused. For this sin we, the body of the Medical Society of New York, were expelled from the AMERICAN MEDICAL ASSOCIATION. You see we have in America our persecutions for heresy, when we have not even the recognition of religions in our constitution. It was in their names only that auto da fés were held and the bodies of men were burned. In these eighteen years, however, the animosities have not died out. You see we are a people of surprises, and have not yet found out our equilibrium. What indeed does all the discord amount to? The whole profession agrees about the inadvisability of consultations, in the very interest of the patient, with a certain class of practitioners, in the average case of illness. In emergency cases such consultations are deemed permissible for reasons of humanity by both parties of the profession. One of them bases its action on the written code of ethics, the other believes a written code to be unnecessary for its guidance. A third forms its own code of ethics, like the Medical Society of the State of Massachusetts, in 1871, and those of other states, without any recrimination on the part of the AMERICAN MEDICAL ASSOCIATION.

It is my opinion that our successors will hardly believe we ever were serious men when they learn that an enlightened and public-spirited profession could go to war over differences of motives and methods when the end in view was the same.

It would not be proper to dismiss the subject of the position of medical men without referring to them as sanitarians. It is to be taken for granted that all family physicians are sanitarians in the families they have charge of. In their societies public hygiene is frequently the subject of discussion. Practical work in that direction is evidenced by the Sanitary Commission of the Civil War, the effective labors of the New York Academy of Medicine in the reconstruction of the Quarantine Islands in the harbor of New York, and its defensive work in cholera times, the—it is true futile—efforts of all the large societies of the country in favor of the re-establishment of the National Board of Health which perished because a short-sighted Congress refused the required appropriation, and the intelligent activity under the direction of medical men, of our municipal boards of health. It is true they are hampered by the greed of politicians. Imagine that in New York the President of the Board of Health must not be a physician. Whether this is more sad or more ludicrous does not matter. The only consolation the citizens of a republic have when they contemplate such an anachronism, is that they have nobody to blame for it, and have nobody to correct it, but themselves.

But I do not wish you to believe that we American doctors are altogether angelic. Wings have not grown from our scapulæ yet. We are not such good citizens as you may believe from what I had to praise. Indeed there is no class of citizens that takes less interest in municipal, and political, other than sanitary, affairs, than doctors. It is true their vocation takes all their time and is exhausting; but the examples of European parliaments in which good medical men are representing the people, should not be lost on us. With us, however, most of the medical men in state legislatures are not the best representatives of the profession from which they claim to come, and wherever there is a medical man in the Congress of the United States, you would not know he was one unless you were told. There is at present a Senator of the United States—think of Rome and of Emilius Paulus and of Cato; of France and Arago and Nélaton; of Germany and of Virchow—who calls himself a homeopathic physician, no: a homeopathic doctor, and is the staunchest adversary of the medical profession and the solidest champion of the antivivisectionists. There is one weakness from which the medical profession of the United States does not appear to recover. In order to explain I should say that in the early times of the Colonies and the United States, when medicine was immature and doctors scarce, the population was obliged to rely on domestic remedies and later on proprietary and quack medi-

[*It may not be inappropriate in this connection to print the following from the Code of Medical Ethics of the American Medical Association, last edition, p. 19.—ED.]

EXPLANATORY DECLARATIONS.

WHEREAS, Persistent misrepresentations have been and still are being made concerning certain provisions of the Code of Ethics of this ASSOCIATION, by which many in the community, and some in the ranks of the profession, are led to believe those provisions exclude persons from professional recognition simply because of differences of opinions or doctrines; therefore,

1. *Resolved*, That clause first, of Art. IV, in the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of the said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

2. *Resolved*, That it constitutes a voluntary disconnection or withdrawal from the medical profession proper, to assume a name indicating to the public a sectarian, or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

3. *Resolved, That there is no provision in the National Code of Medical Ethics in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations can not be correctly interpreted as interdicting under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.*

cines. It is estimated that our people spend at present 200 millions of dollars annually on proprietary medicines; I think that this estimate is too low. Unfortunately medical men rather sustain than combat that bad habit. Our wholesale manufacturers of drugs are always busy, their agents are everywhere, their wares are dumped on the tables of the physicians of the country. The vast majority of the physicians accept them, employ them, and recommend them, and their prescriptions are frequently nothing else but the name of an American or a foreign proprietary compound. I am certain that amongst the most meritorious and instructive books of America there are none less known and appreciated than the Pharmacopeia of the United States and the Formulary of the National Pharmaceutical Association.

If there is any way to lower the regular profession and to raise and enrich the manufacturers of drugs, and drug compounds that is the way. I emphasize this, because I know from the advertisements in your journals, and from the attention paid in your articles and laboratories to proprietary stuffs of all kinds, both medicines and foods, and from oral reports of friends in all countries, that you Europeans are not much, if any, better than we; that our bad example has not taught you and that you are swamped, or about to be swamped in the cloud-burst of greedy commercialism.

Specialism is as rampant with us as it is with you. In all doctrines and branches of practice there are with us, as with you, men who know medicine and practice a specialty. But there are thousands who do not care to know medicine, but mean to make both a reputation and riches out of a limited degree of dexterity and a boundless ocean of self-assertion. That will in time correct itself, but it takes time. I trust it will disappear, if not before, when the meretriciousness of trade and industry will have found its legitimate termination in the establishment of a sounder and juster policy of human society.

In democratic communities the free will of the collective individuals takes the place of government dicta. In place of orders coming from above, rules are obeyed that are universally agreed upon by co-operating individuals. That explains the early formation of medical societies in our thinly settled country. Two were formed during Colonial times, namely, the Medical Society of the State of New Jersey in 1766, and of Delaware in 1776; in 1876 there was only one State in the whole Union that did not have a State Medical Society. Affiliated with the state medical society, and sending delegates to it, there are societies in many of the thirty to sixty or more counties of a state. The state societies as a rule meet annually, the county societies monthly, or quarterly, according to their membership, isolation and distances.

All these societies are represented in the AMERICAN MEDICAL ASSOCIATION, which was formed in 1847, with the exception of the Medical Society of our great State of New York, which was deprived of its membership since 1882 for a reason to which I have referred.

I should state here that the homeopathic and the eclectic practitioners of the United States are legally recognized as separate bodies like ourselves, and are similarly organized. It should also be known that there is a certain relation, legally established, between most of the state medical societies and the legislatures of their states. This legal position is not, however, possessed by the AMERICAN MEDICAL ASSOCIATION.

Still, the voice of that body, powerful through its numbers and the character of its membership, is frequently raised in connection with public questions. So is that of other large societies. The New York Academy of Medicine, for instance, has often advised and cooperated with official bodies of New York City and State, though originally it was not intended that it should exercise any such influence. Other societies which in large cities are formed for special scientific purposes, have no such influence or activity and do not claim it.

The number of medical societies in large cities has probably become too large. There are many practitioners who are members of many more than one society. Beside the legalized society of the County—I now speak of New York City—having about 1500 members, there is the "Association of the County," with about 800, and a third one lately formed—the Society of Greater New York. If our brethren would only remember that there is more strength in forceful consolidation than in fanciful expansion or multiplicity—but then, it is not always strength and harmony that some men seek, but egotistic self-assertion and envy of the success of others. Besides, we have many societies limited to certain neighborhoods on account of the great distances, and special societies such as the Pathological, Neurological, Ophthalmological, Dermatological, Obstetrical; also a large and active German Medical Society, and last, but by no means least, the New York Academy of Medicine, which I mentioned before. Let me say a few words about it, for it illustrates some of the differences between America and Europe.

NEW YORK ACADEMY OF MEDICINE.

When our New York Academy of Medicine was founded in 1847, it was well understood that it was to differ materially from what is called an Academy of Medicine in Europe. The latter is always a government institution, and in some way or other is supported by centralized national means, or accumulated funds. Its members comprise the intellectual and sometimes the social heads of the profession only. Young faces are seldom seen amongst its fellows. Membership is, as a rule, obtained after a long life of successful scientific pursuits only. Their labors and efforts are not always intended for immediately practical aims or objects, but become beneficent by the action of that logical force which ordains that there is no scientific result, no truth ever so abstruse, that will not finally terminate in some tangible application. Though all this be true, the limitation and exclusiveness of membership results in a sort of aristocratic estrangement from the masses of the medical profession, and still more from the community at large.

The New York Academy of Medicine has a broader democratic basis. The high and the lowly, the old and comparatively young, the mature and the youthfully ambitious combine for the same purpose. The Academy is not connected with any school or college. It is self-supporting, and is carried on in the interest of the whole profession, whether members or not. There are no fees or emoluments of a private or individual nature. It is a democratic community, with equal duties and rights. It is not subsidized by the state or municipal corporation. Its aims are the elevation of the profession to a higher scientific standard for increased public usefulness. Having been a member for forty-three years, I have known it when it was small, and followed its growth with grateful and hopeful eyes until it was established in its present palace, with its ever-increasing public medical library, second in size and importance in the country; its absence from medico-political fights about the advisability or superfluousness of a written

code of ethics; its impartial and non-political interest and co-operation in all public sanitary questions; its labors in matters of quarantine, cholera and watershed; its generosity to members and non-members alike; its rooms taken up by many large and small special societies so as to form the medical center of the metropolis; and its ten sections in constant working order. These have given the young and deserving men, during more than a dozen years, the opportunity for legitimate competition, for obtaining a hearing and making their reputations, which are due—next to themselves and their honest work—to the New York Academy of Medicine. Ask me, for a medical institution, democratic, enlightened, independent, generous, and progressive, the daughter of a country free, independent, progressive, and in spite of the present plutocratic clouds overhanging its clear democratic sky, the hope of future mankind, and I shall give you the name of the New York Academy of Medicine.

SOME FACTS ON MEN AND INSTITUTIONS.

During the time of the War of Independence there lived Bard, whose papers on diphtheria are to-day examples of good observation and elegant diction; and Rush, one of the signers of the Declaration of Independence, a fertile writer and famous teacher; a little later Dunglison the lexicographer, Drake, the author of the "Diseases of the Mississippi Valley," and Mitchell; then men like Wormley, whose "Microchemistry of Poisons" appeared in 1867. Contemporaneously there was Bigelow, the inventor of litholapaxy, and Oliver Wendell Holmes, who wrote on the contagiousness of puerperal fever in 1843; then came Harry P. Bowditch, Meigs, Clark, Flint, J. W. Draper and Beard. Remember, I speak of the dead, of some of the dead, only. Of modern times I shall mention no names, but the many studies on malaria, amebæ, blood, and diagnosis in general, commend themselves to the studious expert. The literature of these few generations is very fertile; even smaller men did meritorious work. In 1835 it was Fisher of Boston who discovered the fontanelle murmur, and in 1832 it was a country doctor in Canandaigua who gave the first plausible explanation of the crepitant râles of incipient pneumonia. What should always be remembered is this, that all the men I mentioned were engaged in the practical work of their profession; and that some of them had enjoyed no other instruction than what the insufficient schools of the country could furnish.

Thus it appears that no faulty system of teaching, no defectiveness of schools, hamper a man whose stimulus is necessity from within, and an ideal. Sometimes this alone is sufficient for unusual results. Think of Marion Sims, and, in spite of his insufficiency as a pathologist, of the impetus his genius gave to gynecology.

But this is not what is best known in Europe about us. We are principally credited with the introduction of anesthesia into practice.

Dr. Long, of Jefferson, in the State of Georgia, removed a tumor under ether. But it was a dentist, William Jennings Morton, who successfully gave ether to a patient on whom Dr. J. Collins Warren operated for a tumor, in the Massachusetts General Hospital in Boston, on October 16, 1846. Before this assembly of medical and laymen I confine myself to what Lecky says in his "History of European Morals": "It is probable that the American inventor of the first anesthetic has done more for the real happiness of mankind than all the philosophers from Socrates to Mills." Nothing remains to be said, except that not only was the discovery made in America, but even the name anesthesia was coined by an American, Oliver Wendell Holmes, great as an anatomist, as a physician, a poet and a scholar.

Our perfect ambulance system has been largely imitated in Europe, and to a small extent also, the night medical service for the poor.

Thus, for the humane purposes of medicine you admit America exhibits a good record; in many other respects it does not excel, but equals Europe. Its hospitals, and operating rooms are like yours, many I have been told are better than yours. There is no country in which the demands of antisepsis and asepsis are more scrupulously obeyed than ours. The medical attendance on hospitals, however, is capable of improvement. In Europe a distinguished man is known for his lifelong connection with a special hospital. That is less so with us. The ambition to be on a hospital staff, the democratic tendency of the authorities to be fair to the greatest possible number, are the reasons why the hospital staffs are unduly large, and the year is divided up in alternating temporary services, and men are compelled, in order to have hospital services through the whole year, to seek them in different institutions. The improprieties and drawbacks of this arrangement have so long been felt that the establishment of permanent services, mostly of a special nature, has been resorted to in some hospitals. One particular disadvantage of our system of cutting up our hospital services, which you may have noticed, is that our hospitals, while a source of constant improvement to the lucky incumbents of the medical places, have not contributed to medical literature in the shape of special scientific reports, with the exception of the last few years.

The assistantships are in almost every case in the hands of young graduates who obtain their places after competitive examinations. Their terms of service range from one and a half to two or two and a half years, in semi-annual advances from grade to grade. This method affords a great many young physicians an opportunity for more or less independent work guided by their superiors who make gratuitous daily visits during their term of service. That is how the people of the United States derive immense benefit from the facilities afforded to a very large number of young graduates before they enter into private practice.

When I rose, I did not mean, nor was I expected to entertain, but to communicate facts. I spoke good and evil of medicine and the medical men of my country in order to secure knowledge and appreciation in Europe. What I briefly wrote for you could be only flashlight pictures, which, when more closely inspected, may be apt to convey some information; what I could say are but fragments; what I wished all the time was to help in relieving mutual isolation. This isolation has sometimes led to misapprehension and estrangement, but, I think, you have lost more from them than we, for our eyes were and are always directed to the East, whence we came one-half, one, two centuries ago, and where the sun rises. But it takes the sun only four or five hours to come to us, and it is the same sun. Your books are on our shelves, our students and doctors go to you to learn and to compare, and they return, and the time is fast approaching, I hope, when yours will travel with the sun to enjoy the light of the West. In this way mutual appreciation and respect will engender tolerance and justice, and kill chauvinism. Modern chauvinism is just as much a people's overestimation of its own old methods and actual or alleged achievements as original

hatred. That is why every nation is infected with it; for its cause is ignorance, owing to the narrowness of mental horizons. When vision is locked up in valleys, the sun rises late, or too late, or not at all.

Of jealous rivals, mutual appreciation makes eager collaborators. That I take to be the sacred office of international meetings. That is why, as I have done these twenty years, I gladly came and, with the approval of your officers, selected this subject, to do away with errors and misapprehensions, and aid in procuring mutual understanding and fraternity. Cosmopolitanism does not advance on parallel lines. Some classes of men, some branches of science, must be the first to force a breach. Such a class of men, and such a science is medicine, most humane, both as theoretical knowledge and applied art.

Perhaps I had an additional reason. I come from a country that at present is believed by many of us, and of you, and, I regret to confess, by myself, to be not true, at least temporarily, to its principles and its history, though all firmly believe and trust that the soul of the people is sound and its feeling is conservative.

If only the political and social development were founded on the same basis of methodical research as modern medicine! That soundness, conservatism and method in evolution I claim for American medicine. Having the great advantage of developing out of Anglo-Saxon medicine, with its sober observations and cool thinking, no Schellingian mysticism ever led it astray, and popular fads did not permanently pollute it. It never forgot that the human body is not a mechanism, but an organism, that no specialties can legitimately exist apart from medicine, that the special doctrines and studies in books and clinics and laboratories are its handmaids, but not its equivalents, that what the great American, Benjamin Franklin, said is true, viz.: That the knowledge of natural history is nothing if not applicable to some service to mankind, and, finally, that the object of medicine is always the prevention or cure of disease in man, community or mankind. That is what makes medicine, in its broadest sense, the example and harbinger of what we all should work for, the future enlightened policy of fraternal, cosmopolitan and humanized mankind.

ANESTHESIA.

COMPLETE FAILURE TO SECURE IT WITH CHLOROFORM; PERFECT SUCCESS WITH NITROUS OXID AND ETHER.

D. H. GALLOWAY, M.D.
CHICAGO.

The following case is reported as an example of the value of nitrous oxid as an aid to anesthesia with ether or chloroform:

About 5 o'clock one afternoon I was called to a suburban town to administer an anesthetic, and on arrival received the following history of the case. About 1 o'clock that afternoon, the patient, a young man, met with an accident in a factory, by which one of his legs was completely severed. The accident was such that there was almost no hemorrhage; his fellow workmen put a tight constrictor about the stump and conveyed him to the hospital. A surgeon was sent for and at 3:30 p.m. they prepared to amputate the stump. One of the physicians began the administration of chloroform, but in a moment the patient began to struggle and then ceased breathing. The anesthetic was stopped and the patient resuscitated without much trouble. The chloroform was reapplied and again the patient stopped breathing. The chloroform was removed and the patient resuscitated, and when his condition seemed normal the anesthetic was reapplied repeatedly, but always with the same result. After some time spent in fruitless attempts to get the patient anesthetized, this physician refused to continue the effort and his place was taken by another, who met with no better result. A third one then tried, and after a few trials, in which he met with the same difficulty, and three-quarters of an hour had been spent, the effort to secure anesthesia was abandoned.

On examining the patient I found his respirations rather shallow and 24 to the minute, pulse 92 and good. The pupils were greatly contracted and, although he answered questions rationally, he seemed to be in a partial stupor. I learned that he had received two ¼-grain doses of morphin hypodermically previous to the attempt to anesthetize him, and another of the same amount while awaiting my arrival. I began the anesthesia with nitrous oxid gas; in 30 or 40 seconds the patient was unconscious, ether was substituted and in two or three minutes he was profoundly anesthetized, and in five minutes the operation was begun. The patient did not move a muscle or utter a sound, and the amount of ether necessary to maintain anesthesia was less than half the amount which is usually required. Pulse and respiration did not noticeably change during the continuance of the anesthesia—fifty minutes.

The trouble with the chloroform was doubtless due to the large dose of morphin, to which he seemed to be abnormally susceptible.

THE BACILLUS OF PHILIPPINE DYSENTERY.

EXTRACT OF A REPORT BY ASSISTANT-SURGEON R. P. STRONG, U. S. ARMY, AND DR. W. E. MUSGRAVE, 1ST RESERVE HOSPITAL, MANILA, P. I.

The authors describe in detail the typhoid-like bacillus they found and the cases in which they encountered it, as follows:

Morphology.—Bacilli with rounded ends which differ in morphology in various culture-media. On agar cultures they generally appear as short rods with rounded ends measuring 1 to 3 microns in length and about .4 to .5 broad, occurring not frequently in pairs. In 24-hour bouillon cultures the rods are always longer, often measuring 3 or 3.5 microns in length, occurring frequently in pairs, and occasionally—particularly in old bouillon cultures or in fresh bouillon cultures made after many generations on artificial media—the rods may be seen even longer; and it is not infrequent then to observe filaments of several organisms. The organism possesses no capsule and does not form spores. No flagella have been demonstrated.

Staining Properties.—They stain readily and evenly with ordinary aniline dyes and are easily decolorized by Gram's method, but not decolorized by alcohol except by prolonged treatment. Old bouillon cultures sometimes show slight irregularities in staining.

Cultural Characters.—Anaërobic and facultative anaërobic, very slightly motile bacillus. Spore formation has not been observed. It grows on the usual media both at room temperature and in the incubator.

On agar-plate cultures after twenty-four hours in the incubator superficial and deep colonies develop. The surface colonies are round, of a distinctly bluish-white tinge and delicate, measuring from about .5 to 1 mm. in diameter; under a low magnifying power these colonies are often nucleated, having a darker center with a gradually growing lighter periphery. They are granular with often a tendency toward central radiation of the granules. These colonies are generally round with even borders. The colonies in the depth are small, more yellowish, oval or round, and present nothing characteristic.

Often from the 24-hour plate cultures, made from the stools of acute dysenteric cases, when the plates are held up to the light the colonies of dysenteric bacilli can be picked out from the colon colonies by their more delicate growth and by

their bluish tinge. In older plate cultures the colon demonstrates that it is a heavier grower. From close observation of many plate cultures we have concluded that in a 24-hour plate culture certain colonies of bacillus coli communis resemble the colonies of those of bacillus dysenteriæ so closely that they can not be told apart either by the naked eye or by a low magnifiying power. On the other hand colonies of the bacillus of dysentery never resemble certain common forms of colon colonies.

On agar slants with bacillus dysenteriæ a moderately heavy growth appears after twenty-four hours, bluish-white by transmitted and whitish by reflected light. The growth is lighter than that of bacillus coli communis and sometimes even lighter than that of bacillus typhosus.

On glycerin agar the growth is about the same as on ordinary agar. In gelatin stick culture the organism grows along the track of the needle without liquefying the medium.

In glucose-agar stick cultures there is never any production of gas. The growth occurs along the track of the needle and slightly on the surface about the point of inoculation of the medium. Litmus milk is always slightly reddened after twenty-four hours. The red color does not change further and no other change occurs after one week. Ordinary milk is neither coagulated or peptonized, but appears unchanged though the organism grows well in it.

Litmus-lactose agar is apparently not changed after twenty-four hours. There is no gas formation; neither is there any fermentation in saccharose cultures.

On fresh potato cultures after twenty-four hours there is generally apparently no growth or only slight moisture about the track of inoculation; after three days there is a light straw-colored growth, which gradually becomes heavier and a little darker by the end of a week. Coverslips show that the organism grows well on this medium. In bouillon cultures there is moderate clouding of the media in twenty-four hours, with the formation of a light precipitate. No pellicle on the surface ever occurs. Dunham's solution is clouded in twenty-four hours with the formation of a slight sediment. Neither in Dunham's solution nor in Smith's sugar-free bouillon is there any indol production.

The bacillus is pathogenic for mice, rats and rabbits, when injected either subcutaneously or intraperitoneally. White mice when inoculated with one-half to one c.c. of a 24-hour bouillon culture, generally die within forty-eight hours, but may live three days. Post-mortem the organism may be obtained from the visceral organs and from the heart's blood. When the same amount is injected intraperitoneally the animal dies generally in from ten to twenty-four hours. Post-mortem there is generally edema of the abdominal walls, and a little fibrin over the surfaces of the intestines. The organism may be obtained from the abdominal cavity, visceral organs and heart's blood.

Manila gray rats, when inoculated with one-half to one c.c. of a 24-hour bouillon culture subcutaneously, generally died on the third or fourth day. The organism may be obtained from the visceral organs and sometimes from the heart's blood. When inoculated intraperitoneally with the same amount, death takes place in from twenty-four to thirty-six hours. Post-mortem there is a little fibrin over the intestines. The organism may be obtained from the liver, and generally from the spleen and heart.

In rabbits subcutaneous inoculation of 1 c.c. of a 24-hour bouillon culture generally causes death on the third day. At necropsy the vessels of the epicardium are injected; the vessels of the mesentery are also brightly injected; the gall-bladder is swollen; there are small hemorrhages in the liver; the stomach and small intestine contain a small amount of mucus. The cecum and large intestine are distended with apparently normal feces.

Intraperitoneal injection into rabbits causes death with a more marked peritonitis; otherwise the changes are the same as when the inoculation is made subcutaneously. The organism is found in greater numbers in the liver than elsewhere.

Four monkeys were fed for two weeks daily, with a 24-hour bouillon culture of bacillus dysenteriæ. Two of the monkeys were fed 10 grains of sodium bicarbonate previous to taking the bouillon culture. Three of the cases had at times a moderate diarrhea; at no time was there blood in their stools. Bacillus dysenteriæ was recovered from their stools. In the fourth case, there appeared after about ten days' feeding a little mucus and blood in the stools for two days. Microscopical examination showed the trichomonas intestinalis, red blood-cells and epithelial cells; no amebæ. Bacillus dysenteriæ was obtained from the stools. The feeding was continued, but the stools became normal, with no further result.

Cats and dogs were injected per rectum with large amounts of fresh, bloody, mucous stools from acute dysenteric cases in which the bacillus dysenteriæ had been demonstrated. No dysentery was obtained and no changes in the large intestine.

Cats were given enemas of bouillon cultures of bacillus dysenteriæ. Only slight diarrhea for a few days was produced. One cat was killed nine days after the injection; at necropsy there was no swelling of the mesenteric glands. On opening the large intestine the rugæ were seen well marked, the surface of the bowel bathed in a light layer of mucus. Microscopical examination showed only epithelium and epithelioid cells. No hemorrhages nor ulcerations of the large bowel.

Subcutaneous injection of one c.c. into a Manila pony causes a rise of temperature in the neighborhood of 105 F.; after a few days' illness the temperature declines to normal.

The virulence of the organism varies greatly in different cultures. The organism quickly loses its virulence when grown for any length of time on artificial media. Thus it will be seen that the disease, acute specific dysentery, can not be produced as such in animals any more than typhoid fever can.

We will now attempt to describe the type of dysentery which we have called *acute specific dysentery.*

Acute Specific Infectious Dysentery.—Definition: An acute infectious disease characterized anatomically by an extensive superficial necrosis of the mucosa and by hyperplasia and hemorrhagic infiltration of the lymph-follicles of the large intestine, with induration and thickening of its walls; by hemorrhagic swelling of the adjacent mesocolic glands; and often by parenchymatous changes in other organs. The bacillus dysenteriæ is present in the acute stage of the disease, both in the discharges and in the superficial necrotic layer of the intestinal mucosa. Clinically the disease is marked by an acute onset, by very frequent mucus bloody stools, accompanied by intense tenesmus and by an abrupt termination either in death—usually in from four to fifteen days—or by a gradual improvement, from which an early recovery takes place, or the disease may apparently pass into a subacute stage.

Etiology.—The disease seems widely spread over the island of Luzon, but has occurred particularly among our troops in certain districts. The cases often appear in groups. It is not the rule to find sporadic cass. In one regiment in which in the neighborhood of twenty cases of typhoid fever occurred within a short space of time, there were almost twice that number of acute specific dysentery cases within the same space of time, as verified by the clinical histories and by the blood-serum reaction. It is not possible for us to say just now if the disease is spreading to any great extent. The conditions under which our troops are living are very different from what they were last year; the troops all practically being in garrison now. The disease appears to occur more frequently toward the end of the rainy season. Thus in the latter part of July and in August and September, 1899, there were more cases which came to necropsy with this type of the disease than in the remaining nine months of the year together.

Infection.—Infection probably occurs generally through the drinking water. Milk is a possible means of infection, but not a practicable one here, owing to the scarcity of cows' milk in the Philippines, and to the little use of other fresh milk as food. Infection through uncooked food—salads, cresses, etc.—can not be excluded. Undoubtedly infection is markedly influenced—as in cholera—by the existence of catarrhal troubles, irritating food, bad food, constipation, starvation, physical exhaustion, exposure to wet, etc. Infection with malarial plasmodia can hardly be considered an important predisposing factor, for it occurred in only two of our acute and in only one of our subacute cases.

The Bacillus Dysenteriæ.—The researches of Shiga have

shown that a bacillus similar to, if not identical with, the one we have described above, is probably the cause of a certain form of acute dysentery in Japan. Our own researches seem to show that this organism is probably the etiological factor in the acute specific form of dysentery which occurs here, and which we are attempting to describe. We have isolated this bacillus from twenty-eight cases of dysentery. Nineteen of these cases came to necropsy and all showed similar lesions of the large intestine, to be described below. This bacillus was isolated in eighteen of our twenty-one necropsies on acute dysentric cases. In our first acute case it was not sought for; in the remaining two it was not found. In our subacute cases it was obtained twice out of eleven necropsies. In two cases it was unfortunately not looked for. In the other seven it was not found. We shall refer again to the difficulty in finding the bacillus in the later stages of the disease.

The organism has been sought for in normal stools, in the contents of the large intestine of those dying from other diseases than dysentery and in the feces of monkeys and rabbits, but has never been encountered on any of these occasions. In twenty-six cases of dysentery which presented post-mortem an entirely different anatomical picture of the large intestine, and in all of which amebæ dysenteriæ were present, this bacillus was carefully sought for, and never found. Lastly, the disease has been produced in man on one occasion by inoculation with this organism.

Serum Reaction.—The blood-serum of the acute and subacute cases shows usually a marked agglutinative reaction for this bacillus. The reaction may be present as early as the third day and is usually marked by the fifth or sixth. In one grave acute case which died on the fourth day of the disease, there was no reaction with the serum, either ante- or post-mortem, with this organism. The reaction may persist for several months but usually seems to disappear in a shorter time. In one case of our series it persisted for six months, but has since disappeared.

General Description.—The period of incubation probably lasts not over forty-eight hours. In one case, to be referred to later, in which a pure culture of the organism was swallowed, symptoms of the dysentery began to appear after twenty-four hours. The onset of the disease is usually abrupt; there being no prodromal symptoms generally. Often a patient goes to bed feeling perfectly well; during the night he is suddenly attacked with dysentery, and it is not infrequent for these cases to have from twenty to forty stools during the night. The stools at first contain a small amount of mucus; this mucus rapidly increases in amount, however, and soon becomes blood-streaked; generally within forty-eight hours, or a shorter time, the stools consist of nothing but reddish, bloody mucus. Microscopically these discharges consist, in the later stages, of many red blood-cells, leucocytes, epithelial cells and large epithelioid cells. No amebæ are present in unmixed infections. The movements increase in frequency until finally there appears to be no control whatever over the sphincter ani, and the patient is almost continually on the bed-pan or pad. The straining and tenesmus are often excessive. Toward the end the movements become less frequent, and may cease altogether shortly before death. Extensive hemorrhages are very unusual, but occasionally occur, always mixed, however, with more or less mucus. Excessive thirst is usually a prominent symptom. The tongue is generally coated with a whitish fur.

Fever.—The temperature is very irregular and variable, though almost always is there some pyrexia present. It may often reach 103 or 104 F., or it may not rise above 102 F. Just before death the temperature may rise rapidly, or it may fall as rapidly to a subnormal point; the latter is always a very unfavorable sign.

The blood changes are not constant; there may be a moderate leucocytosis, but in the rapidly fatal cases often the number of leucocytes is not increased. The red blood-cells in the first forty-eight hours are often increased in number, doubtless due to the early loss of water through the bowel; but shortly after the appearance of blood in the stools, notwithstanding this concentration of the blood, the blood count from the corresponding loss of red cells may fall below four million to the cubic millimeter. Differential counts show that when a leucocytosis occurs it is the polymorphonuclear variety of white cells which is increased in number.

Pulse.—The pulse in the early stages of the disease is in the neighborhood of 100. As the disease progresses, particularly in unfavorable cases, the pulse becomes very rapid and may reach 150 or more. The extremities become cold and the patient generally dies in coma, from cardiac exhaustion.

Cardiac complications are rare. Neither acute endocarditis or pericarditis has occurred in any of the cases studied. In the grave cases the sounds early become rapid and feeble and running; they soon lose their normal rhythm and approach that of embryocardia.

Nausea and vomiting are also somewhat uncommon, but occasionally occur, particularly in the earlier stages of the disease. Acute gastritis was found to be present in one subacute case at necropsy. There is often abdominal tenderness, particularly about the region of the colon, on deep pressure. No particular part of the colon appears constantly more tender than the rest. The abdomen is generally not distended. The spleen is generally not enlarged.

Respiratory System.—Pulmonary complications have been occasionally present; lobar pneumonia occurred in one subacute case, and bronchopneumonia in three acute and one subacute case. Acute bronchitis and fibrinopurulent pleurisy have been found, each once in two of the acute cases of dysentery.

Nervous System.—There is no complaint of intense headache. Delirium may occur toward the close, particularly in the prolonged fatal cases. Convulsions have not been noted in any case, nor has neuritis or paralysis been observed as a sequela.

The urine is always decreased in amount, and may contain a small amount of albumin. Retention is often an early symptom. The diazo-reaction does not occur. Acute glomerular nephritis has been found post-mortem in one case.

In none of our cases has the liver been found much enlarged or tender. It is perhaps hardly necessary to mention that liver abscess has not been found in this form of dysentery.

Recovery from the most severe form is rare; in those cases which recover, the loss of weight may be very marked; a loss in the neighborhood of 20 to 30 pounds may occur within two weeks. The patients, after the acute form, are generally left in a weakened state. After convalescence has been established, they do not seem to suffer from dyspeptic or intestinal troubles. One attack does not necessarily protect, for one of our cases writes to us from a distance that he has had a similar attack to his first, which was a severe one and studied clinically by us. The second attack occurred five months after the first, convalescence had been long established between the two. The most violent stage of the disease rarely lasts a week, although patients have lived for ten days in this stage. We have referred before to the fact that the cycle of this type is different from that of the amebic type of dysentery. In the former it is brief; thus of our twenty-one acute cases which came to necropsy, four died on the fourth and four on the fifth day of the disease. None of our cases died before three complete days of illness. Ten others died before the fifteenth day. In those cases which recover, the urgency of the symptoms gradually diminishes, the stools gradually lessen and the temperature declines. Recovery then may be early and convalescence well established by the end of the second week, or the disease may sometimes become subacute and last for months. One of our cases died on the sixty-fourth day of the disease. We regret that we have not as yet studied clinically this subacute stage as carefully as we could wish. These patients are usually poorly nourished and have thin bloody mucus stools from time to time; often not over from three to five in twenty-four hours. These stools in unmixed infections do not contain amebæ. The blood-serum of these cases shows a well-marked agglutinative reaction with the bacillus dysenteriæ, and sometimes an agglutinative reaction with certain colon bacilli; particularly for varieties of colon which show feeble power to ferment sugars, and which only faintly redden litmus milk without coagulating it, and which perhaps should be more correctly referred to as paracolon bacilli. These subacute cases with their serum reactions will be more fully described in a later paper.

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MEDICAL SCHOOLS AND HOSPITALS.

Medical education in the United States has made wonderful progress during the last decade. The day of the two-year year school is gone; that of the three-year school is rapidly drawing to a close; and already we hear talk of establishing courses of medical study extending over five years of eight to nine months each. Simultaneously, scientific medicine has also reached a higher plane than ever before. Original research, new discoveries, and finished clinical and other studies are making their appearances in a manner that betokens a sound foundation, thorough training, and fully equipped hospitals and laboratories. That this progress of medicine in general is gratifying to all who have its true interests at heart, naturally goes without saying. But there is much to be done. The great majority of our medical schools fail to adequately meet the responsibilities they shoulder in offering young men and women "full opportunities" to secure a thorough medical education. The crying need at this time is greater facilities for proper clinical instruction. In this respect, perhaps, all our schools fall short, although there is a heaven-wide difference between the two extremes reached.

One of the necessities of a properly equipped medical school is a large hospital. It does not suffice that this hospital is adjacent to the college; it must be under the full and unrestricted management of the college, as far as the medical work is concerned. It should form one essential part of the machinery for giving instruction, as it is the mainstay of the college. Indeed, to a large extent the hospital, with its wards, its outpatient department, its operating-rooms, its dead-house, and its laboratories, is the medical school. All other instruction is naturally preliminary to observation and study in the hospital. The eager, intense competition on part of recent graduates for all kinds of interneships is sufficient evidence of the need the students themselves feel of further clinical training. Give a student but fair opportunities to work in the hospital and he is more than willing to spend a year or more after graduation. He asks no pay, simply a chance. Indeed, in some medical centers, the best students spend the last year or more of their medical course in the most arduous special training for the hospital examinations—a system fostered by the antiquated method of examining applicants for interneships and by the absence in the college of the necessary facilities for proper clinical instruction. The day of exclusively hearsay learning in medical schools is past.

Like the student of other biologic sciences, the student of medicine demands the chance to see and to feel with his own senses. And he should have it. But how? In the first place no medical school should be considered fully organized without a well-established general hospital under the unquestioned and permanent control of its faculty, as the first and fundamental requisite. It is high time that the state take cognizance of the opportunities for, and the character of, the practical, clinical instruction offered by the various corporations that send up graduates as applicants for state license to practice medicine. At present the state pays little or no attention to this part of the medical schools.

Secondly, the existing hospitals, city, county, and endowed, should be organized and utilized to the fullest extent. Educate the governors of hospitals and the public so that they may see that the use of the hospitals for clinical study by medical students, when rightly conducted, means improvement in the treatment of the patients and of the scientific work of the hospitals. There are neglected opportunities of clinical instruction in all our large cities. The number of interneships may be increased quite generally without detriment to the service.

In the third place, the clinical teacher should be in such a position that he would feel more his responsibilities. The clinical departments should be reorganized, and men should be placed at their head who are properly paid and of whom more may be demanded than of those who regard their clinical services merely as a means of rapidly acquiring a large private clientèle. Commercialism and clinical teaching do not harmonize. There are able young men springing up who are willing to devote their energies to scientific clinical teaching and work for a financial return commensurate with that received by scientists in other departments. This means money, and we are fully aware of the status of our medical schools in this respect. Progress, however, lies in this direction. Finally, it may be emphasized again that in order to realize for our medical students the best opportunities for correct clinical teaching, the hospital must be an integral part of the school, and as completely under its control as the chemical or other laboratory—all other arrangements are in the end unsatisfactory, temporary, and often irksome and unsafe.

THE BACILLUS DYSENTERIÆ.

Reports have been received at the office of the Surgeon-General of the Army as a result of the requirement of the Surgeon-General that a careful study of the dysentery of the Philippine Islands be made in the bacteriological laboratories of the large military hospitals. Assistant-Surgeon Strong, in charge of the First Reserve Army Laboratory, in Manila, and Hospital-Steward W. E. Musgrave, M.D., pathologist of the hospital,

have reported[1] that during ten months 9063 cases were admitted to the First Reserve Hospital, and that in 1328 of these cases, or 14.65 per cent. of the total, a diagnosis of dysentery was entered. Of the dysentery cases 125 died, a mortality of 9.4 per cent., which, however, by no means represents the fatality of the disease, for 338 of the cases were transferred to the United States, as there seemed little hope of their recovery while in the Philippines, and 283 were sent to other hospitals. Only 581 were returned to military duty from the First Reserve Hospital.

The report of these officers is based on careful clinical and post-mortem observations. The anatomical changes found in 111 fatal cases of dysentery enabled them to divide the cases into two distinct types: a specific dysentery, of which 21 of the cases were acute and 11 subacute; and an amebic dysentery, which included the remaining 79 of the fatal cases examined. It is claimed that when the type of each case, as determined at the necropsy, was compared with its associated clinical history, the two types might easily be separated during life, the clinical cycle of the disease as well as the onset being generally somewhat different in each type, and while one may be recognized by its specific blood-serum reaction on the bacillus dysenteriæ, which was isolated in each case, the presence of ameba dysenteriæ in the stools is characteristic of the other.

The disease associated with the infection of the bacillus dysenteriæ is said to be characterized anatomically by an extensive superficial necrosis of the mucosa, and by hyperplasia and hemorrhagic infiltration of the lymph follicles of the large intestine, with induration and thickening of its walls. Clinically the disease is marked by an acute onset and an abrupt termination either by death—usually in four to fifteen days—by an early improvement and recovery, or by passing into a subacute and prolonged stage. In the amebic form there is, on the contrary, an irregular course, marked by intermissions and exacerbations of the diarrhea with a tendency to chronicity and the frequent occurrence of abscess of the liver.

Drs. Strong and Musgrave review the history of the bacteriology of dysentery to 1898, when Shiga, working in Kitasato's laboratory in Tokio, described a bacillus in connection with the epidemic of dysentery then prevailing in Japan. He obtained a specific organism in thirty-four out of thirty-six cases studied, which he believed to be the *vera causa* of the Japanese epidemic. The bacillus is a short rod much resembling the bacillus typhosus or the greater portion of the coli group. Flexner and Barker, who investigated the prevalent diseases of the Philippines[2], state in regard to their bacteriological results in dysentery that tests for agglutination developed two groups of bacilli, one having affinities with the coli communis, the other with the bacillus typhosus. "A bacillus," they say, "belonging to the second group, which is still under study, would seem to agree with the bacillus dysenteriæ isolated by Shiga from cases of endemic dysentery occurring in Japan. It is regarded by us as an important factor in the causation of the dysentery of the Philippine Islands." Strong and Musgrave recognize this bacillus as the cause of their specific dysentery.

Many of the cases of Philippine dysentery which were not expected to recover in the Philippine climate were sent on transports to San Francisco. Here, they were studied by Dr. Charles F. Craig, who examined the stools of 205 cases and the morbid anatomy of 25 fatal cases, reporting on these without any knowledge of the results of the investigations by Drs. Strong and Musgrave. The ameba coli was found in the stools of only three of these cases. Craig, however, isolated a bacillus identical with that found by Flexner in Manila, previously described by Shiga. The bacillus was practically identical with the bacillus typhosus. It agglutinated with the blood of the cases from which it was isolated and also with the blood of a few other cases of dysentery, but not of all, suggesting the possibility of the agglutinating power being lost, or that there were different varieties of dysentery in the hospital.

It would seem, therefore, that in Manila, we have two forms of dysentery, one an amebic form, in which the patient recovers or dies before reaching San Francisco, and the other due to a specific bacillus which if not promptly fatal persists for a long period in a subacute or chronic form.

[1] See page 493.
[2] Johns Hopkins Hospital Bulletin, February, 1900.

QUACK DOCTORS, QUACK MEDICINE, AND A LAY JOURNAL.

Mr. Ewing Herbert publishes the *Brown County World*, at Hiawatha, Kansas, a paper that deserves commendatory mention in every respectable medical journal. Without going into any prior advertising of his course or making, so far as we know, any special religious pretenses, he publishes in a recent issue the following editorial announcement:

"We have at last done what we have wanted to do for many years—thrown out of this paper every advertisement that can be by any chance considered objectionable in any degree. And hereafter we shall print no offensive advertisements. . . . If persons are ailing they should not hesitate to consult a reputable physician. No medicine acts the same way on different persons. What benefits some harms others. From this time on we will not print advertisements of traveling quack doctors. We want clean advertising matter, or none. . . . Last year our patent medicine 'ads' amounted to $800. With one dash we have practically swept aside this source of income. We believe that the people who have glanced at Lydia Redham's offensive propositions, and at Slow's Specific, Bradshaw's Regulator, et al., including the bids of various quack doctors

to cure weak and suffering men and women, will miss them in this paper with not a little pleasure. If you are ailing see a home physician, some good doctor you can confide in. It does not make any difference what ails you, do not be afraid to tell an honorable physician about it, and submit to his advice and treatment. Beware of quack doctors; they want your money and they will get it. And they can not cure you. If your home physician can not cure you, he will probably tell you of some eminent man in the medical profession who can help you; but he should warn you in a conscientious and disinterested way never to permit a quack doctor to treat you. Young folks should talk freely to their parents when ill. The parents will call a physician, if one is needed. Do not read filthy 'ads.' Do not buy quack medicines. Do not have anything to do with strange doctors. They are generally disreputable, and entirely unable to do any more for you than to mercilessly take your money."

This, a New York paper characterizes as a "step so radical that to read it will cause the hair of every normally constituted publisher to stand erect." We are glad that there are such abnormally constituted ones in the wild and wooly West and trust that time will develop more of them. When the newspaper leaders of public opinion, generally, denounce quackery we will have advanced a long step toward the millennium. At present they mutually defend themselves by each other's example and plead the rule that we should be suspicious of scruples that do not trouble other good men. A little more independence of conscience like that of Mr. Herbert would be a good thing if more generally distributed.

THERAPEUTIC PESSIMISM.

Whatever the scientific qualifications and aims of the practitioner of medicine, his especial function is the prevention and the cure of disease, the prolongation of life and the relief of suffering. He must be ever resourceful, and from the therapeutic point of view an optimist. In discussing the causes of therapeutic pessimism among the better men in the profession, Barker[1], in a recent address, points out that when therapeutics is spoken of, disproportionate consideration is given to pharmacotherapy. It is because they are insufficiently known and appreciated that dietotherapy, climatotherapy, hydrotherapy, kinesitherapy, electrotherapy, and psychotherapy are not ranked with pharmacotherapy, and yet in the majority of cases with which the physician has to deal, one or more of these is of far greater importance than treatment with drugs. Psychotherapy especially has a great future. Not until physicians become better psychologists and learn better how to apply psychic methods in the treatment of disease can the disappearance of such psychic epidemics as that represented by so-called christian science be hoped for. In the near future psychopathogenic mechanisms should be carefully studied in order that psychoprophylaxis can have a wider field.

1 Johns Hopkins Hosp. Bulletin, July-August.

BITS OF MEDICAL HISTORY OF PURITAN BOSTON.

A series of articles on "Doctors and Apothecaries of Puritan Boston," by A. Corbett, Jr., has been appearing in the *Boston Globe*. There are many interesting stories of their often varied experience, professional and otherwise, and of their queer ideas of disease and the remarkable remedial agencies employed. In the issue for August 15 is an account of the two Firmins. Giles Firmin was the first apothecary in Boston, "a godly man and an apothecary," is his epitaph. Firmin's son, also named Giles, was a chirurgeon and gave lectures on anatomy, illustrated by the use of a skeleton; he returned to England in 1645 and sought refuge, from starvation, in the ministry. Admitted to the ministry he settled in Stratford; after the restoration he was ejected from the ministry because he was a dissenter; he continued to preach, however, and to practice medicine gratuitously. He advocated the union of all churches. He died in 1697, 82 years old. The patent medicine trade got an early start in Boston. The means of advertising resorted to quite equal in their presumption those of to-day. In a souvenir booklet, "suitable to be given at funerals," entitled, "The Mourner's Cordial Against Excessive Sorrow," there occurs the statement that the publisher has a remedy on sale which "if taken, cureth grippings of the gutts and preventeth dry belly ach."

THE CHOICE OF A SITE FOR VACCINATION.

From the prophylactic point of view it is a matter of indifference on what part of the body vaccination is practiced. For the prevention of smallpox it is only necessary that the procedure be adopted early in life and be repeated at intervals—say seven years, unless special conditions seem to justify making the interval shorter. In order that the protection shall be most effective, the vaccinal lesion should be a positive and well-defined one. A scar that would be designated "good" from the professional point of view, may, however, be a source of disfigurement to personal beauty, and, as the world goes, it will not be wondered at that occasionally fond mothers will object to its presence in a conspicuous place. The arm is probably the most common site for vaccination, but in deference to the wishes of some mothers and out of regard for the sensibilities of esthetic young women, girls are not rarely vaccinated on the thigh. Other sites have also been proposed, such as the arm-pit, the popliteal space, etc., but none has proved universally acceptable. A French physician has recently suggested the sole of the foot as the best place for the purpose, on the ground that, with the individual in the erect posture, this is the only portion of the body that is not in the range of vision, and hence it can exhibit no unsightly scar. This may be thought a joke, but the suggestion is made in earnest. Other advantages claimed for this situation are the convenience of operation and of applying the dressings, the avoidance of complications and the possibility of bathing. The method is readily applicable in the case of children, while an adult could decide for himself or herself whether to submit to confinement in bed or the recumbent posture for the necessary period of time, or to select a more acceptable site.

COMPARATIVE THERAPEUTIC VALUE OF DIGITALIS AND ITS DERIVATIVES.

There are probably few subjects in pharmacodynamics that have been more extensively investigated and more fully discussed than the physiologic action and the therapeutic application of digitalis and its derivatives, and there has been no want of contrariety of opinion with regard to some aspects of the matter. As the result of a research undertaken with the object of harmonizing some of these differences, Arnold and Wood[1] found that digitalin and digitoxin each represent the full circulatory power of digitalis. Digitalis, digitalin and digitoxin, stimulate the cardio-inhibitory mechanism, both centrally and peripherally. In larger doses they paralyze the intrinsic cardio-inhibitory apparatus. They all cause a rise of blood-pressure by stimulating the heart and constricting the blood-vessels. Excessive doses paralyze the heart-muscle in mammals, the organ stopping in diastole. Digitalin of German origin is a stable compound, 1 gram being equivalent to about 70 c.c. of tincture of digitalis. Digitoxin is not to be recommended for human medication on account of its irritant action, which makes it liable to upset the stomach when given by the mouth, or to cause abscesses when given hypodermically; and on account of its insolubility, which renders its absorption slow and its elimination irregular and causes a marked tendency to cumulative action. It is further pointed out that the failure to obtain clinically the good results that experimental observation would lead one to expect from the administration of digitalin may be due, as was formerly the case with digitalis, to the employment of too small a dose. That ordinarily prescribed is from 1/60 to 1/30 gr., while it has been shown that doses of ½ gr. can be administered safely and with advantage.

[1] American Journal of the Medical Sciences, August, 1900, p. 165.

THE FEAR OF TUBERCULOSIS.

The antituberculosis agitation has its inconvenient features. It is impossible for a medical subject to be so generally discussed without exciting popular interest, and this is especially true in this case. A large portion of the public is already hysterical on the subject, and the California preacher who, though a prohibitionist, would rather have his home surrounded by dram-shops than to have a consumptive settle near him is a typical instance of the irrational terror that has been aroused. Even the efforts to aid the tuberculous are sometimes balked by this public craze. A physician, said to be a thoroughly competent specialist, was recently heavily fined in a Canadian city for attempting to start a sanitarium for consumptives; and at Limoges, France, a similar institution was ordered closed by the authorities after it had been mobbed and some of its inmates injured by missiles. This is what we may expect if the output of popular information of the quality now in vogue is kept up, as it has been during the past year or two. Every medical writer who has nothing better about which to write has his say on tuberculosis, seldom imparting anything new and often only reiterating the most extreme statements as to its mortality and contagiousness. Consumption is bad enough; it is probably the most deadly of our diseases, though there are one or two others that are close seconds, but it is made no better by creating an unreasonable fear of its deadliness. We can educate the people to avoid it without scaring them to death, or making them act like brutes to those that are its victims. It would be just as near the truth if we told them that it is an infection that few or none can avoid, but that this infection is comparatively harmless in at least the great majority of cases, and even in the minority the developed disease is not so hopeless as it was formerly thought to be. We can instruct the public that it is not viciously contagious, that its fatality largely depends on predisposition, and that there is far more danger from the promiscuous spitting in houses and conveyances than from contact with a consumptive, if reasonable and easy precautions are taken. While its mortality is apparently steadily, though slowly, decreasing with our better knowledge of the disease, it is only arousing a foolish hope to tell the public that it can be extirpated entirely—certainly not merely by quarantine or isolation.

ROUTINISM IN MEDICINE.

An English contemporary[1] takes occasion to criticise Dr. Osler's recent address at the opening of the Museums of the London Polyclinic. It objects to his inference that practitioners may be divided into routinists and rationalists, at least as far as Great Britain is concerned, and it evidently wants us to believe that there are no routinists in Great Britain. Noticing Professor Osler's related experience with a back-number country practitioner, it says: "We are happy to think that in this country no such person as the Pennsylvania routinist exists. . . . In this land we can assure the Professor he would seldom be able to go into the country without enjoying that pleasure which he proclaims so rare in America—the finding of a practitioner capable of diagnosing mitral stenosis, leucemia, myxedema and such diseases." The first part of this quotation appears to us like the judicious choice of a blissful ignorance, the second part is a misrepresentation; Dr. Osler never proclaimed any such thing and we would not believe he ever intended to infer such a libel. The diagnostic ability of the average regular physician in this country is not, from all we can learn, so far behind that of the representative average British physician—we certainly would not fear a fair test of the question. If we were to judge of the ignorance of the British practitioner by that of the editor of our contemporary on American matters, we should say it was very dense, as shown in his editorial referred to. He complains that the pictures drawn, "as far as his country is concerned, were overdrawn and not altogether kind," but he himself has shown altogether too little consideration for others in exercising his own imagination. Dr. Osler was right, and we believe his remarks will apply as well to Great Britain, France and Germany as to this country, and the picture he drew is as true to life in one way as that of the genial poet-physician whom our contemporary quotes is in another. It is the rationalist who knows how to dispense with superfluities and who is also the best practical man. Like "Dr. Benjamin," he too "flings off his scientific wrappers and goes at the

[1] The Physician and Surgeon, July 19.

work of curing stomach-ache and all the other mean unscientific complaints that make up the larger part of every doctor's business." But he does not fail with the larger problems and he may often see even farther into these minor ones of a physician's life to his patients' and his own advantage. It seems almost ridiculous to solemnly repeat such a self-evident truth, but its aspect to our contemporary as almost "claptrap," has tempted us.

Medical News.

THE NEW HOSPITAL of the Mexican Central Railroad at Aguas Calientes, Mexico, will soon be in operation.

THE MEDICAL STAFF of the British army in South Africa consists of 466 army and 440 civilian surgeons, 566 female nurses and 5668 male nurses and orderlies, exclusive of local nurses and surgeons.

DR. MCCALL ANDERSON, professor of clinical medicine in the University of Glasgow, has been appointed to the chair of systematic medicine made vacant by the resignation of Sir W. Gairdner.

MAJOR-SURGEON JOHN VAN R. HOFF, of the Army, passed through Chicago August 21, on his way from Porto Rico to China, where he is ordered as medical director of the United States expeditionary forces under General Chaffee.

DR. TARNIER'S MONUMENT, a high relief in marble nine feet tall, will be placed in the wall of the hospital at Paris, where the famous surgeon held his clinics. The artist has represented him as operating on a patient, assisted by three students.

THE MARQUIS OF BUTE has offered the University of St. Andrews, Scotland, the sum of £20,000 to be held as a fund for endowing a chair of anatomy in that institution. The subject will come before the University Court at a special meeting called for September 1.

REGISTRATION AT INTERNATIONAL MEDICAL CONGRESS.—Up to August 5, 6170 members had registered at the Congress in Paris. Of these 2293 were from France; 805 from Russia; 572 from Germany; 412 from the United States; 324 from Italy; 222 from Great Britain; 219 from Spain; 147 from Belgium; 141 from Austria; 108 from the Argentine Republic and 101 from Switzerland.

TESTIMONIAL TO CHRISTIAN FENGER.—The Chicago Medical Society has appointed a committee, consisting of Drs. W. A. Evans, W. L. Baum, and J. B. Murphy, to arrange for a testimonial banquet to be tendered to Dr. Christian Fenger on his birthday, November 3. The affair will be national in character and is intended as a token of respect to Dr. Fenger, to show that his colleagues appreciate the services he has rendered his profession and humanity.

DINNER IN HONOR OF LORD LISTER.—Lord Lister was honored in Paris by a dinner given by the "Scientia" Society, August 1, at the *Restaurant des Congrès* in the Exposition grounds. About 60 guests were present. Lucas-Championnière told of his journey to Glasgow to see Lister, and how after seeing and working with him, he returned as an apostle to Paris but was not listened to. Pinard spoke of the debt owed by accoucheurs and their patients to Lister. In his own simple and quiet way, Lord Lister responded, telling of his early struggles, which were without result until Pasteur showed the way, and disclaiming credit for the benefits of his work to humanity, which he said was due to the happy accident of his epoch.

VITAL STATISTICS OF SCOTLAND.—The Registrar-General's report for 1899 shows that 130,656 births were registered, of which 8488 were illegitimate, a birth-rate of 30.5 per thousand. The number of deaths registered was 79,548; 39,919 males and 39,629 females, a mortality-rate of 18.6 per thousand. The eight principal towns of Scotland had a birth-rate of 31.3 per thousand and a death-rate of 20.4 per thousand. Greenock had the highest birth- and the highest death-rate. Zymotic diseases caused 14.57 per cent. of the total mortality; influenza, 1.13 per cent.; measles, 2.92 per cent.; whooping-cough, 2.51 per cent.; fevers, 1.07 per cent.; diphtheria, 0.81 per cent.; cancer, 4.40 per cent.; phthisis, 9.43 per cent.; nervous diseases, 11.33 per cent.; circulatory diseases, 8.47 per cent.; respiratory diseases, 19.49 per cent.; digestive diseases, 7.41 per cent; violence, 4.07 per cent.

ALABAMA.

DR. ROBERT E. NOBLE, Anniston, has been appointed acting assistant-surgeon in the army and is now on his way to China.

DR. T. C. THORINGTON, city physician of Montgomery, gives the annual mortality of that city at 12.93 per 1000, for the year ending May 31, 1900. He states that it is the best record of any city in the Southern States.

CALIFORNIA.

RIVERSIDE COUNTY is erecting a hospital on a commanding site near the village of Arlington.

THE REDDING board of health met for organization August 8, and elected Dr. B. E. Stevenson president.

BUBONIC PLAGUE REPORTS have been decided by Superior Judge Hart, San Francisco, to be public property. The *Bee* of that city instituted mandamus proceedings to compel Secretary Mathews of the State Board of Health to produce the reports on bubonic plague given by Drs. Mouser and Ryfkogel. Dr. Mathews made answer that the reports were not public property, that the discretion for giving or not giving them out lay with the board of health, and furthermore that they were in the custody of the governor of the State.

DISTRICT OF COLUMBIA.

DR. LARKIN W. GLAZEBROOK, Washington, has been reappointed deputy coroner of the District.

THE COMMISSIONERS of the District, on August 9, appointed Dr. J. Ramsay Nevitt, Washington, coroner of the District, to succeed Dr. William P. Carr, term expired.

FLORIDA.

KEY WEST presents a good showing from the health standpoint. Dr. John V. R. Plummer, city health officer, reports 28 deaths for July, the lowest mortality ever noted for that month. The lowest mortality in previous years was 40, in 1899. A peculiar feature in the report is that 4 deaths, or more than 14 per cent., are said to have been due to tetanus neonatorum, and 1 death to tetanus (adult).

ILLINOIS.

DR. ROBERT WILLIAMS, of Carthage, will locate in Alden, Minn.

DR. C. A. FOWLER, Galena, has purchased the practice of Dr. Lucas, of Malta, and will locate there.

DR. E. SARGENT, who has been resident-physician at Mercy Hospital, Chicago, has opened an office in the Chase building, Moline.

ST. MARY'S HOSPITAL, Quincy, is being enlarged by the erection of a new wing. When this is completed the hospital will accommodate 200 patients.

DR. GEORGE N. LUCAS, who has been practicing in Malta for five years has sold his property and will move to Elgin.

A HOSPITAL is to be established at Pekin, provided the necessary funds can be raised. Subscriptions to the amount of $9,000 have already been secured.

THE REPORT of the Harvard Cottage Hospital shows that during the year ended August 1, 115 cases, all surgical, were treated, with only one death. Dr. Colonel M. Johnson, Harvard, is surgeon.

DR. HENRY HATCH, Quincy, has agreed to establish a hospital of 35 beds and to cost $30,000, at Hannibal, Mo., provided that city will donate $15,000, a lot for the hospital, and free gas and water for five years.

THE CLUB SYSTEM, with which we have fortunately been little afflicted in the United States, has invaded this state. An association has been incorporated recently in Bloomington, which for a "small consideration paid each month," agrees to pay the physicians' and druggists' bills of its membership. The explicit statement is made that any physician or druggist desired by the member can be employed.

Chicago.

DR. E. H. OCHSNER returned from Paris August 19.

DR. LEO LOEB went this week to Woods Holl, Mass., for a few weeks.

DR. E. RUSSELL OGDEN has returned. He spent his vacation in New London, Conn., and at other New England points.

DR. GUSTAVUS M. BLECH and Miss Rose Bergenstadt were married August 9, at Wicker Park Hall, by Rabbi Bauer.

DRS. HOMER O. BATES and LAURA C. BATES are at their summer home, Thousand Island Park, N. Y., for the month of August.

DR. JOHN B. MURPHY has returned from Paris bringing the first personal information about the International Medical Congress. He says that the attendance was fair, but that the foreign representation was not so large as had been expected. Germany, England and the United States had meager delegations. The work of the Congress was up to the average. The plans for official entertaining were crippled by the death of the King of Italy.

THE MEDICAL ARRANGEMENTS for the thirty-fourth national encampment of the Grand Army of the Republic, are in the hands of Dr. T. Jay Robeson, late Major-Surgeon First Illinois Cavalry, U. S. V.; Dr. Arthur R. Reynolds, Health Commissioner, and J. F. Hultgen, who acts as secretary. They will be assisted by about 150 physicians, who will be assigned to meet all trains containing soldiers; they will visit quarters free morning and evening and will be designated by a badge and a G. A. R. hat. A temporary hospital has been arranged for at Medical Department Headquarters in the Keith building, Wabash avenue and Monroe street. Field hospitals provided with ambulances will also be established at various points along the line of march to care for emergency cases.

HEALTH DEPARTMENT.

According to precedent the mortality of the week following the heated term should have been as high as, if not higher than, that of the hot week itself. Precedents, however, have been set at naught, this year in many ways, and the recorded deaths last week are 27 per cent. fewer than for the week of continuous highest temperature on record in thirty years. Based on the Department's estimated population of 1,750,000, the death-rate for the week is only 13.5 per thousand, an unprecedentedly low figure for midsummer and marvelously low considering the high temperature immediately preceding. The most gratifying features are the decrease in the deaths of infants and children under 5 years of age, 192 last week and 275 the week before, and the decrease in deaths from the impure-water diseases, 121 last week, 191 the week previous. Of the 12 deaths from sunstroke, 9 occurred during the previous week, the reports from the coroner's office and from hospitals having been delayed. The department records show a total of 26 deaths due to sunstroke as the direct cause, besides many from chronic diseases hastened to a fatal termination by heat exhaustion. While all deaths are, of necessity reported to the Health Department, it is estimated that only about 70 per cent. of the births are so reported. Notwithstanding this discrepancy, the reported births last week outnumbered the deaths by one-third, 454 deaths and 605 births. The deaths reported for the week ended August 18, were 454, 38 less than in the corresponding week of 1899; the death-rate per thousand was 13.51 as compared with 14.75 in 1899. Males to the number of 259 died and 195 females. Of children under 1 year of age 130 died; between 1 and 5 years, 62, and over 60 years, 99. The principal causes of death were: Acute intestinal diseases, 116; consumption, 45; heart diseases, 31; nervous diseases, 27; violence, 19; Bright's disease, 16; cancer, 14; sunstroke, 12; convulsions, 10; apoplexy, 9; suicide, 5. The number of contagious diseases reported during the week was 49, of which 23 were scarlet fever and 26 diphtheria. Antitoxin was employed in 126 cases. At the stockyards, 31,715 pounds of meat were condemned. In the laboratory, 451 samples of milk and cream were analyzed, 7.53 per cent. of which were found to be below grade.

INDIANA.

DR. A. B. DARBY, of Waterloo, has received the Republican nomination as state senator for his district.

A PHYSICIAN of Monticello was fined $10 in a justice court for failing to put a "whooping cough" card on a house in which several children were suffering with the disease.

THE INDIANA State Medical Board has under consideration a uniform code of medical laws for the United States. Until this shall be accomplished, the board will adhere rigidly to the rule requiring all applicants from other states to pass the examination required before they are granted licenses to practice.

A COMMITTEE from the Delaware County Medical Society, met the county commissioners and requested an appropriation of $10,000 for the establishment of a county hospital, of which there is urgent need. They agreed that if this appropriation was made, $10,000 additional would be provided from other sources. The commissioners temporized and pleaded poverty.

IOWA.

SOME MISCREANT has twice in one week set fire to the office of Dr. Edward H. Knittle, Onslow.

DR. G. L. EVERALL, of Farmersburg has sold his property and practice to Dr. Irving Munger, who moves to that place from Elkader.

KENTUCKY.

DR. J. A. AVERDICK, Covington, returned from a three-months tour of Europe, August 11.

TWO KENTUCKY PHYSICIANS, Francis Wells, Louisville, and David Hampton, Covington, have started for the seat of war. They have recently been appointed acting assistant-surgeons in the army.

DR. T. HUNT STUCKY, Louisville, has been chosen medical director for the Triennial Conclave of Knights Templar. Upon him will devolve the organization of first-aid and hospital service during the conclave.

LOUISIANA.

THE QUARANTINE against Tampa, Fla., was raised August 18, by the State Board of Health.

DR. HENRY E. MENAGE, New Orleans, returned, August 8, from his service with the Army in Manila.

THE "SENSES HOSPITAL," or Eye, Ear, Nose and Throat Hospital of New Orleans, realized $6,632.66 August 17, as the proceeds of a festival held for its benefit.

MAINE.

DR. W. A. PURINGTON, of Sangerville, was recently married to Miss Susie Weeks, of Chicago.

DR. S. WATSON BRAGG was married to Miss Adele L. Leland of Enfield, August 14. Dr. Bragg is a practitioner of Montague and his wife received training as a nurse at the Eastern Maine General Hospital. They will reside in Montague.

MARYLAND.

THE DEATH-RATE in Baltimore for the week ending Aug. 18 was 25.08, viz., whites 23.81 per cent., colored 32.66. These proportions show the greater effect of high temperature on the white race, the usual proportion being between the two races about 1 to 2½. The total number of deaths was 261, as compared with 174 for the corresponding week of last year; 85

were in children under 5, and 43 are attributed to "sunstroke." Cholera infantum caused 38, dysentery and diarrhea 13, typhoid fever 9, and consumption 20.

THE LAW requires persons removing night soil in Baltimore to secure a permit from the city commissioner of health and haul it through the streets to the city scows, where a fee is paid for dumping it. Instead of doing this, many persons employed in this work have been selling it to farmers living around the city. The practice has become so general, as to threaten to pollute the streams supplying a part of the city. The law is now openly violated. The State Board of Health, the city commissioner of health and the county officials are working together for the correction of the evil. It is thought that if the fee for dumping were abolished, there would be more ready compliance with the law.

MICHIGAN.

DR. A. N. TREADGOLD, of Kilmanagh, is going to locate in Cass City.

DR. J. C. RUTLEDGE, Detroit, has been appointed acting assistant-surgeon in the army and expects to be ordered to the Orient.

DR. J. IRVING MABEE, of Rockwood, has joined the army medical department as acting assistant-surgeon, and started for the seat of war in the far east, August 15.

DR. LOUIS W. PEASE, Saginaw, has been ordered to report for duty at San Francisco as acting assistant-surgeon, U. S. Army. He served throughout the Spanish-American war as surgeon in the Thirty-third Michigan Infantry, U. S. V.

MINNESOTA.

THE ANNUAL MEETING of the board of trustees of the state asylum for the insane was held at Fergus Falls, August 9. Dr. David N. Jones, Gaylord, was re-elected president of the board.

"ELECTRICAL INSTITUTES" in Minnesota are soon to have their rights tested by the State Board of Medical Examiners, which claims that no one has a right to administer electrical treatment for disease without first possessing a physician's license. The question hinges on whether or not electrical treatment constitutes practice of medicine under the statute.

MISSOURI.

THE MACON COUNTY (MO.) MEDICAL SOCIETY will hold a clinical meeting at Macon, September 4.

DR. THOMAS J. THORPE, St. Louis, was accidentally, and probably fatally shot on August 11.

DR. HARRY TATUM, a recent graduate of Jefferson Medical College, Philadelphia, has located in Brunswick.

DR. HENRY J. SCHENCK, of St. Louis, is to be married, August 30, to Miss Natalie Altheimer, of the same city.

DR. CHARLES GOWANS, St. Louis, was married to Miss Hermione Hinton, August 15. They will reside at 6013 Cates avenue.

THE BILL authorizing the erection of a new city hospital on the site of that destroyed by the tornado was passed by the St. Louis city council, August 7.

DR. HEBER ROBARTS, of St. Louis, editor of the *X-Ray Journal*, is at the head of a syndicate which proposes to build a sanitarium devoted to the treatment of disease by electricity.

DR. EDWARD WALLACE LEE, who has just returned from Europe, will locate in St. Louis and devote himself exclusively to surgery. Dr. Lee was for some years professor of surgery in the Creighton Medical College, Omaha.

KANSAS CITY QUACKS are to be vigorously attacked by the State Board of Health. If the local member of the board, Dr. S. C. James can make good his assertions and is backed up by law, great results should ensue, but most medical practice acts are noteworthy for the way in which they can be ignored and that with impunity and immunity.

MONTANA.

THE EPIDEMIC of smallpox at Anaconda has cost Deer Lodge County nearly $20,000, since October last.

NEBRASKA.

DR. L. A. LANSING, of Buffalo, N. Y., has located in Emerson.

DR. P. T. CONLAN, who has been practicing in Columbus, has located at Platte Center.

NEW JERSEY.

DR. PETER B. DAVENPORT has been appointed health officer of Vailsburg.

AN AUTOMOBILE accident, which caused the death of a woman, is the reason for a $25,000 damage suit brought against Dr. W. L. Vroom, of Ridgewood; coroner of Bergen county. An endeavor is also being made to indict him for criminal negligence.

THE management of the Children's Seashore House in Atlantic City is making an urgent effort to raise the sum of $4,000, which is required to keep this house open for its customary season. The establishment was erected in 1872 and has accommodations for 225 children. Up to the time the Children's Seashore House had closed last summer it had since its foundation treated 16,947 children, and 4088 mothers, or a total of 21,035 patients.

NEW YORK.

DR. A. M. LEONARD, Cicero, was married to Miss E. Vickery, of Clay, August 8.

THE WILL of the late Dr. J. C. Rappold, Brooklyn, was filed for probate, August 9. His estate is valued at $12,000.

THE GENEVA CITY HOSPITAL, Ontario county, N. Y., will receive $10,000 by the will of the late Judge Francis O. Mason, and an additional $80,000 on the death of his two sisters.

OHIO.

DR. E. HOMER GEE, of Xenia, a graduate of Rush Medical College, and late interne at the Freedmen's Hospital, Washington, has located in Zanesville.

DR. HENRY VERDIER, Cincinnati, has started for San Francisco. He has been assigned to duty as acting assistant-surgeon in the army.

SMALLPOX appeared in 103 places in 53 different counties of the state between January 1 and August 1, according to the state health board's report. The total number of cases was 1647 and the deaths numbered 20.

THE STAFF for the Protestant Hospital for the ensuing year was announced by the trustees, August 14. Dr. David N. Kinsman was appointed chief of staff; Drs. Charles W. McGavran and Clarence F. Schlitz, resident physicians, and George M. Waters, radiographer.

PENNSYLVANIA.

DR. S. G. BURKHOLDER, has removed from Chicago and will locate in Rothsville.

THE little town of Catawissa is suffering from a mild epidemic of typhoid fever. During the week two new cases have occurred.

ANTHRAX has broken out among a large herd of cattle at Tunkhannock. Five have died, while 150 have already been exposed to the infection.

SEVEN cases of smallpox have developed at Erie, and a number of persons have been exposed to the disease. A rigid quarantine is being maintained.

THE causes of death, reported by census enumerators to the clerk of the Orphan's Court in Buck's County, include "hart parlias," "paraliya," "hart truble," "newmonia" and "live cuplat," the latter being interpreted to mean liver complaint.

THIRTEEN employes of the Pennsylvania Railroad at Altoona were, August 17, taken seriously ill with nausea and cramps, supposed to have been due to polluted drinking water.

IN Allegheny Furnace, a suburb of Altoona, a very large number of persons are suffering with diphtheria. Five new cases were reported on August 17.

VINELAND and Millville, two adjoining towns, are waging war against each other over the proposed establishment of a system of sewage by the former town. It is believed that should it drain into Maurice River the water-supply of Millville will become infected. One attorney has heretofore at-

tended matters for both places, but he is now in Paris. Millville threatens to get an injunction in regard to the matter.

DR. L. B. OLINGER, Pittsburg, has been made an acting assistant-surgeon in the army, and has been ordered to leave for the Pacific coast, there to report to the surgeon-in-charge for assignment to duty in China.

Philadelphia.

DR. W. W. KEEN will return from Europe about the end of September.

DR. WHARTON SINKLER sailed for Europe, August 18, to be gone several weeks.

DR. H. W. CATTELL has resigned from his position as pathologist to the Philadelphia Hospital.

THROUGH the bequest of George W. Cross, of Lower Merion, the Wills Eye Hospital has become beneficiary to a considerable estate.

DIFFERENT manufacturers of quinin of Philadelphia are now busy endeavoring to supply large orders for that drug to be sent to the army in China.

THE PHYSICIAN to the Empress of China is Dr. Hu King Eng, who graduated from the Woman's Medical College in this city several years ago, and is now in Pekin.

THE BOARD OF HEALTH has recently purchased two new ambulances for the Philadelphia Hospital, and also four disinfecting wagons, which will soon be completed for service.

ONE of the daily papers—*Bulletin*—of this city has for some time been exposing another fraud in the shape of a "Doctor of Suggestive Therapeutics," who has been duping the unwary.

THE DAIRY and Food Commissioners have now on file twenty-three bills against persons selling adulterated articles of food. Most of these are for selling oleomargarin under the guise of butter.

DR. GEORGE S. MINTZER, resident-surgeon at the Medico-Chirurgical Hospital, has been appointed surgeon in the United States Army. He has been ordered to report for duty at San Francisco and left, August 18.

A MILD epidemic of typhoid fever has broken out in the northwestern section of the city, which has been attributed to drinking impure water. Many of the cases have been admitted to the German and St. Joseph's Hospitals.

THE Children's Country Week Association during the past week despatched 350 more children to the surrounding country districts. Within the past three weeks this association has sent 4000 children to spend a few days at country homes.

THE roof garden on the top of the Children's Hospital at Twenty-second and Walnut streets has proved of the greatest utility in keeping down the mortality of the hospital during the extreme hot spell which has been prevailing here for several weeks.

SATURDAY, August 11, was the hottest day that has ever been recorded for this month in Philadelphia. The maximum temperature was 100.06. The next day, Sunday, was the fourth hottest day ever recorded, and registered 99.2 at 3:50 p. m. These figures, it must be remembered, were those obtained on the fourth floor of the postoffice building. On the ground the heat was almost intolerable. On August 12, ten deaths were attributed to the heat.

A MATERIAL increase in the mortality is noted for this week, the total number of deaths being 550, an increase of 98 over that of the previous week and an increase of 169 over the corresponding period of last year. The principal causes of death were: sunstroke, 56; apoplexy, 16; nephritis, 26; cholera infantum, 42; tuberculosis, 54; marasmus, 27; inflammation of stomach and intestines, 24; diphtheria, 64 cases, 10 deaths; scarlet fever, 22 cases, 1 death; typhoid fever, 77 cases, 8 deaths.

RHODE ISLAND.

AN EMERGENCY hospital is to be established in Pawtucket under the charge of Dr. Francis M. Harrington. An option has been secured on a suitable house at 374 Main street and the promoters intend to have the hospital ready for use by September 1.

SOUTH DAKOTA.

CHARGES have been preferred by H. Kautzman, editor of the *Yankton Beacon Light*, against Dr. Ross, the superintendent of the state asylum for the insane at Yankton. The charges include official misconduct, selling of state property and drunkenness. It is believed that the fight is purely political, as the management of the asylum has been satisfactory.

TENNESSEE.

DR. H. F. HAM has been selected by the county board of health to take charge of the Emergency Hospital, Memphis, vice Dr. McKay, suspended.

ERLANGER HOSPITAL, Chattanooga, is soon to have a modern operating-room. Dr. Henry Berlin has secured donations to the amount of about $1000 for this purpose, and the work will be undertaken at once.

DR. ALEXANDER B. DANCY, who has been taking a post-graduate course in New York, has returned to Jackson. He has had inflammatory rheumatism for two months and is unable to resume practice at present.

DR. BENJAMIN B. CATES has been elected to fill the chair of surgery in the Tennessee Medical College, Knoxville. Dr. H. J. Kelso takes the chair of anatomy; Dr. S. R. Miller takes Dr. Kelso's old place as professor of clinical and operative surgery, while Dr. C. R. Zemph becomes professor of materia medica and therapeutics. The chair of obstetrics was united with that of gynecology under Dr. S. M. Miller. Those changes were necessitated by the recent death of Dr. John L. Howell.

TEXAS.

THE COST of fighting smallpox in Galveston, from February till May was $2748.74. In his report to the Board of Health Dr. C. H. Wilkinson, health physician, states that 30 cases of smallpox were cared for in the camp, and 13 suspects were held in detention. The health department made 1410 out of the 2427 vaccinations reported, inspected 2053 premises, removed 10,184 dray loads of garbage and 1026 dead animals.

VIRGINIA.

DR. WARREN JACOBSON, Richmond, has been appointed acting assistant-surgeon in the army and has been assigned to duty in China.

EIGHTY-NINE candidates were successful in passing the recent examination before the state medical examining board at Lynchburg.

WASHINGTON.

DR. W. C. COX, Everett, has been appointed by Governor Rogers a member of the State Board of Medical Examiners, to succeed Dr. Van Zandt, of New Whatcom.

THE CITIZENS of Spokane living near the proposed site of the Sisters of Providence Hospital are making the usual protest against the location of the hospital and threaten to bring injunction proceedings.

WEST VIRGINIA.

FORTY NEW CASES of smallpox were reported from the interior of Taylor County, and a general quarantine has been established.

WISCONSIN.

DR. G. I. HOGUE, who has been interne at the Milwaukee Hospital, has been appointed acting assistant-surgeon in the army, and will leave for San Francisco in a few days.

CANADA.

DR. HARRY J. WATSON, Ottawa—Trinity, 1896—has been appointed a surgeon in the United States Army for service in China.

DR. JAMES THIRD, superintendent of the General Hospital, Kingston, Ont., has resigned that position. It is understood that Dr. Herald, of the same city, is likely to be appointed his successor.

DR. A. D. STEWART, late of the house staff of the Toronto

General Hospital, has been appointed surgeon of the C. P. R.'s palace steamer Empress of Japan, plying between Vancouver and Yokohoma. He took charge August 20.

DR. GORDON BELL, secretary of the Board of Health of Manitoba, is investigating outbreaks of typhoid fever in Winnipeg and other places throughout that province. On the completion of his inspection, a pamphlet will be issued on the subject.

THE BOARD OF HEALTH of Woodstock, Ont., has decided to compel bakers to give up the present bread system of giving small tickets to their customers, as they consider the distribution of these around to different houses is liable to spread disease.

DR. J. N. E. BROWN, Dawson City, for several years secretary of the Ontario Medical Association, who went to the Yukon two years ago as secretary to Governor Ogilvie, has been promoted to the position of secretary of the Yukon Territory.

DR. A. C. SINCLAIR, Rossland, B. C., local Dominion Health Inspector, reports that there have been no fresh cases of smallpox in Rossland or Nelson since he assumed charge of the maintenance of quarantine, May 1.

THE NURSES who were sent by the Victorian Order of Nurses to Dawson City two years ago, and who did such heroic work, have been withdrawn, because the improvement in the conditions of life has rendered their further presence unnecessary.

THE CHIEF of the Dominion Health Department, Dr. Montizambert, Ottawa, is on his way to Dawson City to investigate smallpox there and to take action to prevent the spread of the disease. He will also determine whether it is expedient to raise the quarantine.

THE CANADIAN RED CROSS COMMISSIONER TO SOUTH AFRICA.

Dr. George Stirling Ryerson, founder of the Canadian Red Cross Association, has returned to his home in Toronto, and in an interview accorded the daily press gives some very interesting opinions regarding hospital work in that country during the progress of the war. One of the interesting statements made by him is to the effect that Lady Roberts' hospital for sick and wounded soldiers at Bloemfontein is almost entirely fitted out with supplies furnished by Westmount—a suburb of Montreal—contributors. He considers the insinuations of Mr. Treves in regard to "the plague of women" as ungracious and uncalled for, as he is loud in his admiration for the good work performed by Lady Roberts, her daughters, and other English ladies of wealth and station. Shortly after Dr. Ryerson's arrival in South Africa, where he went as Canadian Commissioner of the Red Cross Association, he was appointed British Commissioner at Lord Roberts' headquarters. Here he had abundance of opportunity of observing in every direction. At Bloemfontein there were sometimes five thousand sick at one time; fifty-three deaths occurred there in one day, and altogether there occurred there 1900 deaths in six weeks. Being interrogated as to what foundation existed for Mr. Burdett-Coutts' charges, he declared that these accusations were substantially incorrect. He had never made any complaint to Dr. Ryerson while in South Africa, although he knew that the Canadian Commissioner had a large amount of money and stores at his disposal. When one considers the difficulties that had to be surmounted, Dr. Ryerson states that the hospital arrangements could not have been more admirable. Rudyard Kipling he also scores. As a Canadian he is very proud of the laurels won by his countrymen in South Africa.

STATE OF HEALTH IN THE YUKON DISTRICT.

The report of the Medical Health Officer of the Dawson district, dated June 23, refers to the state of health in the Yukon at that time. Dr. J. W. Good states there is no typhoid, no diphtheria, no smallpox—five cases since reported—and no dysentery. This condition of affairs is very gratifying and is said to be due largely to the fact that Dawson has now a good supply of drinking water. At the date mentioned, the number of pay patients in the Good Samaritan Hospital was 11; number of non-paying, 12; total, 23. The number of pay patients in St. Mary's Hospital was 4; non-paying patients, 14; total, 18. The system of having all non-paying patients make declaration as to the state of their finances, certified to by a friend, before their admittance into either of the hospitals is said to work with great smoothness. During the time the smallpox was prevalent in different portions of the United States and Canada, the medical health officer urged the board of health to be prepared for an outbreak of the disease by laying in a quantity of vaccin, as vaccination had not as yet been performed to any extent in that district. The vendors of diseased meats, rotten eggs, and unsuitable foods of all kinds have been watched very closely during the past year, and prosecutions along these lines have resulted in much good in this direction. It is stated that the water supplied by the new company is of a good quality, and the source of the water-supply is believed to be good. Improvements have been made in the way of drainage, and obstructions of various kinds have been removed from the streets.. The question has arisen as to what shall be done with a few patients in the hospitals at municipal expense who will never recover their health and strength in Dawson. The health officer advises, to save these from becoming a chronic burden on the community, that they be especially examined, and then all of them shipped out simultaneously in charge of an intelligent nurse. From an economical standpoint this would pay Dawson City.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

The thirteenth annual meeting of this association was held in the library rooms on June 28, the president, Dr. J. F. W. Ross, in the chair. The secretary, treasurer and curator read encouraging reports, showing that substantial progress was being made, and that the library was of very great value and usefulness. The president is of the opinion that next year the provincial government will apportion a grant for the benefit of the association. The by-laws and catalogues of the association are now in the printer's hands, and in the course of a short time will be sent out to members of the profession in Ontario. Dr. N. A. Powell, as curator, reported that 161 new volumes and three cases still unopened had been added to the library during the past year. Dr. Powell is a member of the American Association of Librarians and is enabled to secure duplicates from other libraries in exchange. At a meeting of the board of directors, held on July 4, Dr. Ross was re-elected president; Dr. R. A. Reeve, first vice-president; Dr. A. A. Macdonald, second vice-president; Dr. G. H. Carveth, third vice-president; Dr. H. J. Hamilton, secretary; Dr. H. A. Bruce, treasurer; Dr. N. A. Powell, curator, and Dr. W. J. Wilson, assistant curator.

ASSOCIATION OF EXECUTIVE HEALTH OFFICERS.

The fifteenth annual meeting of this association met in Kingston, Ont., on August 14 and 15. In the absence of the president at the opening of the session, Dr. T. V. Hutchinson, London, Dr. William Oldright, Toronto, took the chair. Mayor Minnes delivered an address of welcome. Mr. A. McGill, B.A., assistant analyst of the Department of Inland Revenue, Ottawa, read the first paper. The subject was the "Effects of Food Preservatives on Public Health," and the essayist took the stand that the use of chemicals to destroy the germs in milk was dangerous to human life. Dr. Sheard, Toronto, stated that he had had several cases come under his notice where persons, especially young children, were poisoned by the re-freezing of ice-cream. Dr. Bryce thought that the importance of cleanliness in the dairy had not made the advances it should have in the last twenty-five years. Dr. Sheard read a paper on his experience in recent vaccination work. In the evening the delegates enjoyed a moonlight excursion among the Thousand Islands, given in their honor. On the meeting assembling on the second day, Dr. Cassidy, of Toronto, read an interesting paper on tuberculosis and means for its cure. The president, Dr. Hutchinson, of London, delivered the annual address. It dwelt with the sanitary progress of the century. The education problem was the subject of a well-prepared paper by Dr. Bryce, as viewed from a public health standpoint. Dr. E. E. Kitchen, St. George, delivered an address on "The Sanitary Needs of Cheese Factories and Creameries." Dr. Herald gave a brief outline of the sewer system of Kingston. Dr. Bryce read a paper by Mr. Willis Chipman, C.E., Toronto, on "Septic Tank Method of Sewage Precipitation." Dr. W. T. Connell, pathologist to Queen's University,

contributed a paper on "Vitality of Typhoid and Diphtheria Bacilli in Milk." A paper on the use of antitoxin in the Toronto Contagious Disease Hospital, prepared by Professor Shuttleworth, was read by the secretary. A motion to establish laboratories at London and Kingston was carried unanimously. Dr. W. T. Connell was elected president, and Brantford was chosen as the next place of meeting.

LONDON LETTER.

THE BRITISH MEDICAL ASSOCIATION.

(Continued.)

PROBLEMS IN RURAL SANITATION.

DR. JOHN C. THRESH, president of the Section of State Medicine, in his introductory remarks, said that one of the most interesting problems which has engaged the attention of scientists during recent years is that of the period for which man will continue to live on this earth. The effect of overpopulation is well exemplified in the periodic famines generally associated with pestilence, which affect wide areas and millions of people in India and China, countries in which the population has attained its maximum density.

The purely rural population is slowly decreasing and the urban population rapidly increasing; therefore, year by year the feeding problem becomes more serious. Land is going out of cultivation and decreasing in value, yet it is often impossible to obtain a small quantity to effect sanitary improvements. In most of our towns every house is efficiently drained and abundantly supplied with pure water, in the rural districts, nuisances from the improper disposal of filth abound on every side, and the water-supplies too often are unsatisfactory in both quantity and quality.

One of the greatest problems of the age is how to bring back the people to the land. One of the chief requirements for restoring prosperity to our rural districts is increased facilities for acquiring small areas of land for sanitary improvement. With a sufficiency of land adjoining or near each house, the necessity for sewers would be avoided in most of our rural districts. The supply of water to our cottages is another important problem. Sanitary authorities are averse not only to the expenditure necessary to provide a public supply of water, but also to causing landlords to provide such a supply.

A vitally important requirement is decent cottages for our rural laborers. Many acts of parliament have been passed, having for their object the better housing of the working classes. Those who drafted these acts worked on the erroneous assumption that unless carefully restrained, sanitary authorities would be infected with a mania for building. Consequently, the utility of these laws has been practically nullified in the rural districts. What is needed is an act which will encourage sanitary authorities to build and will offer them every possible facility to provide decent accommodation for the laborer with the least possible trouble and at the lowest possible cost.

TREATMENT OF THE WOUNDED AT SEA.

INSPECTOR-GENERAL BELGRAVE NINNIS, M. D., R. N., in the opening address of the Section of the Navy, Army and Ambulance, spoke of the means at the disposal of the naval medical officer for the treatment of the injured on board a man-of-war, more especially during an action.

The essentials of a fighting ship comprise the maximum of offensive and defensive armament combined with capability of rapid motion and a steady platform. Light and fresh air are especially necessary to the sick, but these can be obtained in sufficient quantity only above the water line where the sick and injured would be exposed to danger during an action. For these reasons the naval medical officer must not be judged by the ordinary standard, as he is obliged to work under great disadvantages. He must depend entirely on himself, and history has shown that zeal and resourcefulness are notable characteristics of the naval branch of the profession.

It is intended in the future to supplement fleets in war times with floating hospitals, having modern fittings and appliances. During action these ships would keep out of range, but would collect the wounded when the battle was over, and as they sailed under the regulations of the Geneva Convention would be free from molestation or capture.

ADDRESS IN OBSTETRICS.

The address in Obstetrics was delivered by Dr. W. J. Smyly, vice-president of the Royal College of Physicians in Ireland. He said that though some knowledge of midwifery had existed since the earliest times, scientific midwifery commenced with Ambrose Paré, in the sixteenth century. In the first half of the present century the mortality of childbed, especially in hospitals, was probably greater than in any other period of the world's history. Toward the close of the seventies, however, an improvement suddenly took place. In the Paris Maternity, for example, the mortality dropped in one year from 8 to 4 per cent. and in 1881 to 1 per cent., and has since improved. Semmelweis showed that the heavy puerperal mortality at the Vienna Hospital was due to infection from the fingers of students engaged in post-mortem examinations. But his discovery fell on deaf ears and he fretted himself into insanity. With a little more patience he might have discovered that the seed he had sown was slowly bearing fruit. Michaelis and Lange adopted his views with success. Simpson warmly advocated them in England. The wonderful discoveries of Pasteur, published two years before the death of Semmelweis, confirmed his views and placed them on a scientific basis. Lister completed the work by his discovery of antisepsis. But it was not until 1870 that antiseptic principles were applied to obstetrics and practically banished puerperal fever from the hospitals. At first the Listerian method was closely followed, but it was too cumbrous for general practice. The spray was replaced by the douche, and the uterus was washed out after every labor. This process reached its climax when permanent instillation was introduced by Schückling. Soon serious accidents and even deaths from injection of antiseptic fluids and air into the veins began to multiply. Döderlein then showed that douches acted injuriously by removing natural secretions, which had in themselves antiseptic properties. Consequently, at the Leipzig Hospital, prophylactic douching was abolished and the mortality fell 10 per cent. The fact taught by Semmelweis and Sir J. Simpson, that infection is carried chiefly by the hands, shows the importance of attending to this detail. "No handling, no septic infection," was not far from true. Leopold has proved that patients delivered without vaginal interference make a better convalescence than those who have been examined even with the most scrupulous antisepsis. Experience, therefore, proves—what bacteriological investigation leads us to expect—that aseptic hands can not be produced by any known process. Local interference should, therefore, be restricted within the narrowest possible bounds. The best method to insure this was to resort to diagnosis by external examination. Dr. Smyly's advocacy of this, which he considers the most important advance in modern midwifery, is the most valuable and practical point advanced in the whole meeting of the British Medical Association. In 1888 Credé wrote, "Even the simplest manipulation may cause infection . . . internal examination should be avoided altogether." By external examination the presentation and position of the fetus, whether the fetus be living, dying, or dead, and whether there are one or more children, whether labor has set in or not, and its course and progress, can all be ascertained. Pelvic deformity is suggested by pendulous abdomen and abnormal mobility and obliquity of the uterus, especially in primiparæ. It is an ominous sign to find the head above the brim after labor has commenced. In prolonged labors danger is indicated by thickening of the upper, and thinning of the lower, uterine segments, elevation of the contraction-ring and prominence of one or both round ligaments. External examination is equally useful in the third stage of labor, but not only is external examination safer than vaginal, but it is also more reliable. In the Rotunda Hospital, Dublin, where the students are obliged to write the results of their examinations, the speaker found that mistakes in diagnosis were much more frequent with vaginal than with external examinations. But there are two things which can be made out only by vaginal examination—the condition of the os and prolapse of the cord. If for any reason, such as inexperience or a very fat and rigid abdominal wall, external examination is unsatisfactory, the vaginal method becomes necessary.

PREVENTION OF INSANITY.

In the Section of Psychology, Dr. Percy Smith read a paper bearing this title. There were, in 1899, 105,086 lunatics in England, an increase of 3114 on the previous year, which was the largest increase recorded. There was also an increase in the ratio of the insane to the general population. Heredity was given as a cause in 20.4 per cent. of male, and in 25.9 per cent. of female patients, according to the figures of the Commissioners of Lunacy for 1893-1897. Next to heredity, alcohol was the most prominent cause, accounting for 22 per cent. of the male and 9.1 per cent. of the female cases. Simple drunkenness should render an individual liable to arrest, and it should be made penal to serve a habitual drunkard with liquor. As to general paralysis of the insane, the yearly average of cases was 13.1 per cent. of the male, and 2.8 per cent. of the female cases. The predominating influence of syphilis in its causation is now generally recognized. Syphilis should be made a notifiable disease—a course which would check its ravages and prevent general paralysis.

OCULAR HEADACHE.

Mr. W. A. Brailey (Guy's Hospital) read a paper on this subject. It is a general law that the greater the error of refraction, the less the effect on the head, because a great defect leads to abandonment of the effort of accommodation, the patient seeing as best he can without it. Uncorrected presbyopia is a rare cause of headache, except just at its commencement. It might cause strain and burning, but not headache. Similarly great inequality of refraction gives comparatively little trouble, the worse eye being unused.

GASTRIC ULCER.

Dr. J. F. Payne (St. Thomas' Hospital) read a paper on this subject. He said that the condition was becoming increasingly prevalent. Statistics of the six quinquennial periods, 1870-1899, showed that the number of cases of gastric and duodenal ulcer admitted to St. Thomas' Hospital were respectively 30, 38, 70, 103, 174, and 216. This was parallel to the increase of other digestive diseases, e. g., appendicitis. Only one diagnostic sign had been added in the last thirty years—hyperacidity of the gastric juice. The peculiar pain was present in only a minority of cases, and in some, pain was entirely absent. As to hematemesis, he was surprised to find that out of 48 fatal cases, it had occurred in only 14, while in non-fatal cases it had been present in 95 per cent. His explanation was that many cases proved fatal by perforation, in which complication hemorrhage was known to be uncommon, while non-fatal cases were often sent to hospitals for that very symptom. As to the hyperacidity, he knew little about it, for it was not justifiable to pass a tube into a stomach, possibly the seat of ulceration. The main principle of treatment was to give rest to the stomach by rectal feeding. It was doubtful whether the rectum absorbed much food. Peptonized food was the most likely to be absorbed. He allowed a little warm water by the mouth, but not for the first twenty-four hours after hemorrhage. A danger of long-continued rectal feeding was syncope. Rectal feeding might safely be continued for sixteen days if water was given by the mouth, and for seven days if water was withheld.

CEPHALOTRIPSY OF THE AFTER-COMING HEAD.

Mr. J. H. Targett (London) said that this operation was hardly referred to in the text-books. It was, of course, only rarely required. He had performed it in one case in which no doubt Cesarian section would have been the better operation, but this was declined. The patient was a rickety dwarf, aged 29 years, and was near the end of the ninth month. Labor was induced by hydrostatic bags, after which a leg was brought down. Delay took place and it was decided to extract. The trunk was delivered, but the head remained in a position of flexion above the contracted brim. As no impression could be made on it, and as the funis had ceased to pulsate, craniotomy was performed. The suboccipital region was chosen as the most accessible. On applying the cephalotribe, the lower blade was in apposition with the face, but the upper could not be passed over the occiput, owing to lateral contraction of the pelvis and incomplete dilatation of the lower segment of the uterus. The result was that the end of the blade repeatedly caught in the edge of the perforation. The blade was, therefore, passed into the skull through the perforation and the base crushed in its anteroposterior diameter. The plan succeeded admirably. The cephalotribe was, he thought, best applied in the manner followed in this case, because subsequent experiments gave the same result.

Correspondence.

State University and Higher Medical Education.

ST. PAUL, MINN., July 31, 1900.

To the Editor:—In your editorial of July 21 you specifically mention Michigan, Minnesota and Iowa, and allege that by low fees and mediocre requirements for entrance and for graduation, university medical schools acquire larger classes than they can properly instruct, that their clinical material is insufficient, and inferentially they are obstructive to the advance of medical education. Michigan and Iowa will doubtless resent this attack and defend themselves.

Minnesota's fees are $100 per annum. There are none higher to my knowledge, excepting a small number of schools in our largest cities. Our entrance requirements are equaled by few and *excelled by none excepting* Harvard and Johns Hopkins' Universities and possibly the College of Physicians and Surgeons, New York. Our entrance examination is now equivalent to that required for admission to the academic department of the University of Minnesota. In two years' time it will be equivalent to a sophomore, and in three years time to a junior entrance in the academic department. The twin cities of Minneapolis and St. Paul, with a population near 400,000 and numerous hospitals of modern type, afford unlimited facilities for clinical instruction, while our laboratories are not surpassed in America. PARKS RITCHIE,, M.D.
Dean, College of Medicine and Surgery, University Minnesota.

[Dr. Ritchie evidently did not read very carefully the editorial referred to. The reference to the three universities named was certainly complimentary rather than otherwise. The main point of the editorial is not touched on, viz., that the medical departments of state universities have not taken the lead in the movement for higher medical education. There was no intention to reflect on the medical departments of the Universities of Michigan, Iowa or Minnesota, as each of these is recognized as being in the front rank of medical educational institutions.—ED.]

Castor-Oil in Neuralgia.

ASHTON, R. I., Aug. 13, 1900.

To the Editor:—As touching the treatment of facial neuralgia by castor-oil, your correspondent, Dr. W. S. Caldwell, in his "Rambling Notes of a Roving Doctor," in THE JOURNAL of August 11, page 368, says the theory entertained in the Allgemienes Krankenhaus, Vienna, is that the beneficial effects of this mode of treatment result from the elimination of toxins, which, absorbed into the circulation, produce this disease.

About a month ago a young woman appealed piteously to me for relief from supraorbital neuralgia, from which she suffered excruciating agony. She had been treated with various remedies by her brother, who is a physician in good practice, without benefit. On the advice of a young hospital surgeon the brother intended to have the supraorbital nerve resected, but deferred the operation until after his return from Europe, where he had gone, and was expected back in three weeks.

I prescribed castor-oil to be taken two or three times a week, from which she obtained immediate relief, continuing to the present. She still takes the castor-oil at less frequent intervals. Strange to say the oil does not purge her, which would seem to indicate that the remedy, in this case at least, exerts a beneficial influence apart from its cathartic effect.

N. O'D. PARKS, M.D.

Not a Case of Death from Nitrous Oxid.

In the symposium on anesthetics presented before the New York County Medical Association last Spring—see THE

JOURNAL, vol. xxxiv, pp. 705-712—reference was made to a fatal case from nitrous oxid, reported in Philadelphia. The case occurred in the practice of Dr. John D. Thomas, who sends the following letter to correct the erroneous impression that death was caused by the nitrous oxid.

NEW YORK CITY, Aug. 18, 1900.

To the Editor:—This was not a case of death under nitrous oxid. A personal friend of mine had taken the gas on three previous occasions, and there was no apparent indication that he should not take it again. The gas was given and the right upper second and third molars were extracted. His recovery was complete in the usual time, and he rinsed his mouth with a tumbler of water while sitting in the chair. I had gone to my desk in another part of the room, and he arose from the chair and walked to the washstand, ten feet away. He filled the glass and returned to the cuspidor beside the chair and continued rinsing the mouth while standing. He conversed with me in the meantime. This, he repeated until he had used three glasses of water, occupying at least twenty-five minutes, after which he stood before the mirror, and with his right hand drew back his lips and endeavored to see where the teeth had been taken from. As he removed his hand he looked at it and said: "That hand feels numb." He looked a little pale, and as my first thought was that looking at the wounds had made him feel faint, I directed him to lie down on the couch while I proceeded to get him some brandy, and then I realized that his speech was thick and indistinct. Physicians were immediately summoned, and everything was done to save him, but he died about four hours afterward. The coroner's jury gave a verdict of death from apoplexy, and that the gas was not the cause of it, in accordance with the medical testimony given there.

The gentleman was certainly in such a physical condition that any exciting cause might have produced the same effect, and his taking the gas was but an incident leading to that effect." Yours respectfully,

JOHN D. THOMAS, M.D.

Deaths and Obituaries.

WILLIAM J. MUSGROVE, M.D., was found drowned in the river at Hudson, Wis., August 11. He was graduated from McGill University, Montreal, in 1882, had practiced for several years at Drayton, N. D., and since 1892 at Grafton, N. D. He was Vice-President of the State Board of Health, and of the State Medical Society. He had been out of health and despondent for some time, and it is supposed that he committed suicide.

DAVID W. CONAUGHY, Latrobe, Pa., died August 10, after a long illness, from asthma complicated by the extreme heat, at the age of 72 years. He was a graduate of Jefferson Medical College, Philadelphia, of the class of 1858; a member of the AMERICAN MEDICAL ASSOCIATION, State Medical Association, etc. He was highly esteemed and was intimately associated with all plans for the growth and betterment of Latrobe.

WILLIAM J. ELSTUN, M.D., formerly of Indianapolis, died at Washington, D. C., August 10, at the age of 62 years. He was a graduate of Bellevue Hospital Medical College in 1866, served as a physician at the Central Hospital for the Insane, Indianapolis, and was appointed special medical examiner in the pension department by President Harrison.

HENRY S. HURD, M.D., died August 11, at the home of his son, Dr. Henry M. Hurd, superintendent of Johns Hopkins University Hospital. Another son is Dr. Arthur W. Hurd, superintendent Buffalo State Hospital for Insane. The deceased was born in Roxbury, Conn., in 1815, and had practiced in Galesburg, Ill., from 1854 up to three years ago.

ELAM L. STEWART, M. D., died at Carmi, Ill., August 11, aged 76 years. He was a graduate of Jefferson Medical College, Philadelphia, of the class of 1860; served during the Civil War as surgeon of the 87th Illinois Regiment, and was the first mayor of his native town, Carmi.

GEORGE W. LIVESAY, M.D., died at Ironton, Ohio, August 5, aged 75 years. He was born in West Virginia, took his academic course in the University of Virginia and Columbia College, N. Y., and was graduated in medicine from the University of Pennsylvania in 1848.

EDWIN EVANS, M.D., died at Rome, N. Y., August 16, aged 56 years. He was graduated from the College of Physicians and Surgeons, New York, in 1870, and was a member of the visiting board of the Oneida County Hospital.

EDGAR A. GRAFTON, M.D., Montreal, P. Q., was drowned while bathing in the St. Lawrence river at Berthier, P. Q., July 29. He was 33 years of age and a graduate of McGill University, Montreal, of the class of 1891.

FRED W. MEYER, M.D., died recently at Aguas Calientes, Mexico, of typhoid fever. He was a graduate of the College of Physicians and Surgeons, Chicago, 1899. He was buried at his former home, Montezuma, Ia.

JOHN L. ANCRUM, M.D., Abbeville, S. C., died at Rossdhu, August 6. He was graduated from the Medical College of the State of South Carolina, Charleston, in 1860, and retired from practice a few years ago.

CHARLES W. PARSONS, M.D., Louisville, Ky., dropped dead from heat exhaustion, August 18. He was a graduate of the medical department of Washington University, St. Louis, of the class of 1857.

ALBERT PAUL RUEDI, M.D., Forest Hill, Cal., committed suicide by shooting himself through the heart, August 6. He was 56 years of age, and had had a hemorrhage from the lungs a few days before.

THOMAS H. B. BROWN, M.D., died suddenly at his home in Bridgewater, Va., August 13, at the age of 65 years. He was graduated from Jefferson Medical College, Philadelphia, in 1859.

JOHN F. KINCHELOE, M.D., Conway, Ark., died August 5, after a long illness. He was a graduate of the medical department of the University of Nashville, Tenn., of the class of 1871.

WILLIAM B. WINSTON, M.D., of Memphis, Tenn., died August 12, from gastric cancer. He was a graduate of the medical department of the University of Nashville, 1861.

THEODORE C. LAVERTY, M.D., of Middletown, Pa., died at that place on August 15. He was a graduate of the Jefferson Medical College, class of 1854.

HENRY J. COSTELLO, M.D., a resident of Philadelphia, died on August 13. He was a graduate of the Jefferson Medical College, 1895.

JULIUS C. RAPPOLD, M.D., Brooklyn, N. Y., died August 3. He was a graduate of New York University of the class of 1861.

DEATHS ABROAD.

SIR WILLIAM STOKES, surgeon-in-ordinary to the queen and consulting surgeon to the British forces in South Africa, died at Durban, Natal, August 19, at the age of 61 years. He was the son of Dr. William Stokes, regius professor, Trinity College, Dublin. In 1861 he was awarded the gold medal of the Pathological Society, and in 1864 he was made surgeon to the Meath Hospital. He was examiner in surgery in Queen's University, and had been president of the Pathological Society, the Irish Graduates' Association, and the Royal College of Surgeons. He was a member of numerous medical societies and an extremely prolific contributor to the literature.

DR. GIRARD, of Puy de Dome, at the age of 71 years, who was a member of the Chamber of Deputies for several years, and had served in the Riom city council and as mayor from 1863 till 1893.

DR. QUINTAA at Poret, his native town, at the age of 57 years. He was a republican senator from the Basses-Pyrénées, and had represented his province in the national legislature for eleven years.

JOHN STUART STEVENSON, M.R.C.S. ENG., L.R.C.P. LOND., Captain Indian Medical Service, died from heat apoplexy at Lucknow, India, July 20, at the age of 28 years.

DR. FRANZ MICHL, professor extraordinary of surgery at Prague.

DR. E. LEGALL, who co-operated with Berillon to found the "Institut Psycho-Physiologique" in 1890, has committed suicide. He was a chevalier of the Legion of Honor, 52 years of age and universally respected, but was financially unsuccessful, lived alone and in poverty.

Societies.

Coming Meetings.

American Academy of Railway Surgeons, St. Paul, Minn., Sept. 5-6.

American Association of Obstetricians and Gynecologists, Louisville, Ky., Sept. 18-20.

Medical Society of the State of Pennsylvania, Wilkesbarre, Sept. 18.

Medical Society of the Missouri Valley, Council Bluffs, Ia., Sept. 20.

American Electro-Therapeutic Association, New York City, Sept. 25-27.

American Public Health Association, Indianapolis, Ind., Oct. 2-5.

Idaho State Medical Society, Boise, Oct. 4-5.

Utah State Medical Society, Salt Lake City, Oct. 4-5.

Wyoming State Medical Society, Cheyenne, Oct. 9-10.

Mississippi Valley Medical Association, Asheville, N. C., Oct. 9-11.

Tri-State Medical Society of Alabama, Georgia and Tennessee, Chattanooga, Tenn., Oct. 9-11.

Vermont State Medical Society, Rutland, Oct. 11-12.

New York State Medical Association, New York City, Oct. 16-18.

Medical Society of Virginia, Charlottesville, Oct. 23.

THE DELAWARE COUNTY (Pa.) MEDICAL SOCIETY held a meeting in Chester, August 9, at which Dr. Thomas C. Stellwagen, Jr., of Media, read a paper on "Blood Examinations."

THE MEDICAL AND SURGICAL SOCIETY OF SOUTHWESTERN ILLINOIS convened in Jerseyville, August 3, Dr. Edward L. H. Barry read a paper on "Pneumonia." Dr. Carl Black, Jacksonville, also read a paper.

THE JACKSON COUNTY (Ind.) MEDICAL SOCIETY met at Seymour, August 8. Dr. J. K. Ritter read a paper on "Medical and Surgical Diseases of the Rectum," which was followed by a general discussion.

THE BRECKENRIDGE COUNTY (Ky.) MEDICAL SOCIETY was organized early in August, at Hardinsburg. Dr. R. T. Dempster, Glendeane, was elected president, and Dr. Milton Board, Jr., Hardinsburg, secretary. Smallpox was the subject discussed at the initial meeting.

THE MADISON COUNTY (Ala.) MEDICAL SOCIETY held its regular meeting at "Doctors Home," Huntsville, President J. P. Burke, Meridianville, in the chair. The discussion of the day was on "Summer Diarrhea of Infants." Dr. B. E. Graham, Gurley, presented a paper on this subject.

THE WILLIAMS COUNTY (Ohio) MEDICAL ASSOCIATION was organized at Montpelier, August 9, and will hold monthly meetings. Officers elected are: Dr. H. W. Wertz, Montpelier, president; Dr. T. E. Schrider, Bryan, vice-president; Dr. Warren L. Hogue, Montpelier, secretary, and Dr. L. A. Beard, Pioneer, treasurer.

THE JO DAVIESS COUNTY (Ill.) MEDICAL SOCIETY met in Galena, July 25, for its second annual session. After a short business session, the society adjourned to the Grant Hotel, where it was entertained by the president, Dr. H. T. Godfrey.

THE MUSKINGUM COUNTY (Ohio) MEDICAL SOCIETY met at Zanesville, August 9. Dr. C. M. Lenhart read a paper on "Fracture of the Neck of the Femur in the Aged;" Dr. J. M. Fassig, a paper on "Whooping Cough," and Drs. E. C. Brush and E. C. Logsdon reported cases.

THE MORGAN COUNTY (Ill.) MEDICAL SOCIETY convened for its regular monthly meeting at Jacksonville, August 9. Dr. Moffett read a paper on "Acute Miliary Tuberculosis." Miss Abbie Pierson, through the secretary, Dr. Carl E. Black, presented the society with some valuable books and manuscripts.

THE SUSQUEHANNA COUNTY (Pa.) MEDICAL SOCIETY met at Heart Lake, August 7, Dr. C. W. Caterson, Franklin Forks, presiding. The delegates to THE AMERICAN MEDICAL ASSOCIATION made their reports, and several cases were reported and discussed.

THE WABASH COUNTY (Ill.) MEDICAL SOCIETY held its annual meeting in Mount Carmel, July 31, and elected the following officers: President, Dr. Norman Leeds, Bellmont; vice-president, Dr. Jacob Schenck; secretary, Dr. John B. Maxwell, and treasurer, Dr. George C. Kingsbury, all of Mount Carmel.

THE UNION MEDICAL ASSOCIATION OF NORTHEASTERN OHIO held its 116th quarterly session at Massillon, August 14, at which Dr. Joseph F. Hobson, Cleveland, read a paper on "Fractures of the Pelvis With Injuries of Its Contents," and Dr. E. O. Leberman, Akron, read one on "Treatment of Certain Skin Diseases."

THE FAIRFAX (Va.) MEDICAL SOCIETY, at its annual meeting, August 7, elected the following officers: President, Dr. T. M. Lynch, Annandale; vice-president, Dr. James T. Jones, Ashburn; secretary, Dr. George B. Fadeley, Falls Church; treasurer, Dr. Edwin L. Detwiler, Herndon, and corresponding secretary, Dr. Frederick M. Brooks, Swetnam.

THE KEOKUK COUNTY (Iowa) MEDICAL SOCIETY met at Sigourney, August 8. Papers were read by Miss M. Sherlock, on "Trained Nurses;" Dr. L. B. Oliver, on "Prostatic Enlargement;" Dr. J. C. Williams, on "Smallpox;" and Dr. C. J. Lukens, Oskaloosa, on "Simple Eye Diseases Encountered by the General Practitioner."

THE MUSCATINE COUNTY (Iowa) MEDICAL SOCIETY met, August 9, at Wilton for its regular quarterly session, Dr. Henry Munson Dean, Muscatine, in the chair. Papers were read by Dr. George Morgridge, Muscatine, on "Inflammation" and by Dr. H. Johnson Dean, Muscatine, on "Injuries of the Cornea," and several interesting cases were reported.

THE WASHINGTON COUNTY (Pa.) MEDICAL SOCIETY met at Washington, August 14, President Dr. J. B. Irwin, Washington, in the chair. The subject for discussion was "Diarrheal Affections of Summer," and papers were read by Dr. W. V. Riddle, Burgettstown; O. P. Dearth, Washington; W. H. Alexander, Canonsburg; F. C. Stahlman, Zollarsville, and N. S. Veatch, California.

THE CHAMBERS COUNTY (Ala.) MEDICAL SOCIETY held a meeting, July 26, at Lafayette. Hon. A. J. Driver, Jr., delivered an address on "Chambers County and Her Medical Profession," and State Health Officer Dr. W. H. Sanders, Montgomery, an address on "Importance and Duties of County Health Officers." Dr. W. H. Hudson read a paper on "Appendicitis," and Dr. W. D. Gaines one on "Typhoid Fever."

THE FORT DODGE (Iowa) DISTRICT MEDICAL SOCIETY met in Webster City, August 14. Papers were read by Dr. A. G. Shillito, Independence, on "Appendicitis;" Dr. C. W. Rummel, Webster City, on "Exophthalmic Goiter;" Dr. Matthew D. Mann, Buffalo, N. Y., on "Some Common Mistakes in Gynecological Practice;" Dr. A. M. Pond, Webster City, on "Drainage;" Dr. C. H. Churchill, Fort Dodge, on "Two Surgical Cases," and Dr. G. A. Geist, Stanhope, on "Hypnotism and Applied Therapeutics."

THE CAYUGA COUNTY (N. Y.) MEDICAL SOCIETY met in Auburn, August 8. The committee reported on "Public Danger from Distribution of Samples of Poisonous Medicine in Advertising." Papers were read by Dr. George Slocum, Genoa, on "Observations of the Scarlet Fever Epidemic of Spring of 1900;" Dr. Charles L. Lang, Meridian, on "Pine Bluff, N. C., as a Health Resort," and Dr. B. C. Loveland, Syracuse, on "Treatment or Care of Functional Nervous Disease." Dr. Amelia W. Gilmore, Auburn, made an appeal for a public medical library, and Prof. James Law, of Cornell University, delivered an address on "Rabies and Hydrophobia."

THE MEDICAL SECTION of the National Fraternal Congress will meet in Boston, August 27. The program includes the address of the president, Dr. R. E. Moss; committee reports by Drs. Moss, Millman and McCollom on "Height and Weight," and by Drs. McCollom, Moss and Grosveneor on "Mortality from Cancer and Consumption;" also papers by Dr. J. Millman on "Result of Correspondence With Medical Examiners;" Dr. E. Francis Morrill, on "Appendicitis from an Insurance Standpoint;" Dr. A. H. Warner, on "How We May Secure Better Medical Examinations"; Dr. J. O. Davis, on "The Local Examiner and His Responsibility," and Dr. Mary Danforth, on "Female Risks."

Colorado State Medical Society.

Thirteenth Annual Convention, Denver, June 19-21, 1900.

(Continued from page 449.)

SYPHILIS. MODES OF INFECTION.

DR. E. P. HERSHEY, in opening the symposium on syphilis, said that it is astonishing that this loathsome disease does not spread more among the innocent than it does, through the carelessness displayed by those who are afflicted. Syringes, money, cigar-cutters, lead pencils, soap, towels, and drinking cups have all been responsible for the inoculation of the innocent. It is the duty of every physician to warn his patient not to trust too implicitly in the purity of his neighbor.

PROBLEMS OF DIAGNOSIS OF INITIAL SYPHILITIC LESIONS.

DR. W. B. DAVIS said that the differential diagnosis is to be made from chancroid, herpes progenitalis, gumma, epithelioma and lupus vulgaris. Between chancre and chancroid, differentiation is not always satisfactory, even after careful consideration of established points of contrast; and a degree of uncertainty will continue to linger until the bacillus—or whatever it is—of syphilis is discovered. The diagnosis, therefore, should always be given guardedly.

BACTERIOLOGY OF SYPHILIS.

DR. W. C. MITCHELL reviewed the literature on the subject, and came to the conclusion that the question is as far from solution as possible. One of the principal difficulties in the way seems to be the fact that animals are not susceptible to syphilitic virus, thus limiting the experimentation on this subject. He said that almost nothing of importance had been added to the rules formulated by Fernelius some 400 years ago, namely, 1, that the syphilitic virus first infects one portion of the body and then spreads through the entire organism; 2, all the tissues and fluids are finally drenched with the syphilitic poison; 3, that the tissues and fluids are the vehicles of the contagion; 4, that the infection occurs only by direct contact on a portion of the mucous membrane or skin denuded of its epithelium; 5, that syphilis dating from birth has had its origin in the parents; 6, that syphilis may remain latent in the system; 7, that a person suffering from syphilis can not receive a fresh infection.

CUTANEOUS MANIFESTATIONS OF SYPHILIS.

DR. J. M. BLAINE does not attach much importance to the color of syphilitic eruptions. An albino would show a pink lesion, while a negro would present a black one, and the various shades of color would represent the colors of the rainbow. The sensation of burning, stinging, itching and pain so common in most dermatoses are, in almost all cases of syphilis, entirely absent. The earliest skin eruption in secondaries is the erythematous. There is enlargement of the post-cervical and epitrochlear and other glands. The papular syphilid makes its appearance usually about two months after the chancre. It may be mistaken for lichen planus, but the latter shows a tendency to grouping and is rarely found on the palms and soles. There is no condition likely to be mistaken for pustular syphilid unless it is on the face, chest and back, in which case one might think of acne vulgaris. Acne comes about the age of puberty, and is always associated with comedones. Pigmentary syphilid is not influenced by syphilitic treatment; it disappears of its own accord. Papulosquamous syphilid may closely resemble lupus erythematosus and psoriasis. Lupus is a disease of slow progress, and occurs about the nose and cheek; the syphilid occurs on the face. Psoriasis when removed shows a bleeding surface, and decided preference for extensor surfaces, and soon develops into larger, scaly patches. There is no other condition for which tubercular syphilid could be mistaken if the central cicatrix is carefully observed.

SYPHILIS OF THE BRAIN.

DR. J. T. ESKRIDGE in discussing this subject said that acquired syphilis of the brain is found nearly three times more frequently in the male than in the female. The proportion of syphilitics manifesting brain symptoms is between .5 and 1.5 per cent. The time between the primary lesion and the appearance of brain symptoms is variable and indefinite. There are the so-called precocious cases in which the brain symptoms appear within the first year of the infection. He has seen a young man with syphilitic derangement of the cerebral arteries, who was stricken down with apoplexy three months after the initial lesion. At no time can it be asserted that the danger of brain lesion is passed. Chronic alcoholism renders the brain vulnerable to the poison of syphilis. Only the specific lesions, those that occur as a direct result of the poison of syphilis, are especially amenable to antisyphilitic treatment, while the numerous injuries caused by the presence of specific lesions, or the degeneration resulting from toxemic or other blood states which may result from syphilis, are in no way specific in character, and respond tardily to antisyphilitic treatment, as do the lesions resulting from causes wholly unassociated with syphilis. Gummata vary in size from a line to several inches in diameter, the tendency being to degenerate, and they may be single or multiple. If appropriate treatment is instituted early, before caseous fibroid degeneration takes place, the whole morbid process may be removed and a cure, so far as local brain trouble is concerned, may be complete. He has not met with a case of venous hemorrhage due to syphilitic degeneration of the vessel.

One of the marked features of syphilis of the nervous system is the irregularity and multiplicity of the symptoms. Headache is a prominent one, as is also insomnia, or when pressure is present, somnolence. Jacksonian epilepsy or mental defect is present, according to the site of the lesion.

It is a common occurrence that in a few hours, or a day or more after the development of pronounced paralysis in syphilitic subjects, the limbs may in some cases begin to move at will and soon regain partial or complete power of motion. There are three possible explanations for this phenomenon which is not found in hemorrhage, thrombus or embolism: 1. A small vessel has been occluded, though on account of the disease of numerous other vessels, the shock has been so great that immediate and almost complete paralysis has resulted, but as soon as there is recovery from the shock, collateral circulation is established. 2. The occluded vessel may supply an area just without the motor region, but owing to the crippled state of the general circulatory brain apparatus, function is temporarily lost in the adjacent or motor area. 3. The collateral vessels to the affected area are diseased but their calibers are not occluded. The beginning of mental failure is represented by a group of symptoms—dizziness, absentmindedness, forgetfulness and loss of ambition. At first the patient takes an interest in himself, but as the trouble increases he is apt to become indifferent to his condition, and, if not treated will eventually have dementia. The treatment may be divided into prevention, general management, and antisyphilitic remedies. Active treatment from the outset is the most reliable prophylactic. Potassium iodid in 15-gr. doses three times a day gives the best results; and tonics should not be neglected.

There are numerous non-specific intracranial lesions resulting from specific causes which fail to yield to specific medication. It is pitiable to see a hemiplegic or dement whose helplessness has been caused by thrombotic occlusion of a vessel, indirectly due to syphilis that has been treated by mercury or potassium iodid for months. The profession must learn to treat syphilis of the brain according to the lesion from which the patient is suffering, and have some regard for the patient, notwithstanding that he is so unfortunate as to be the victim of syphilis.

OCULAR MANIFESTATIONS OF SYPHILIS.

DR. EDWARD JACKSON said that of all the cases of syphilis only 3 per cent. suffer from iritis. Iritis occurs as a tertiary lesion in connection with gumma of the iris, with interstitial keratitis, and without notable lesions of the cornea. Cataract occurs in syphilitics by mere coincidence, sometimes, however, as a result of extensive diseases of the uveal tract, on which the nutrition of the crystalline lens depends. The transparency of the vitreous suffers more frequently. Choroidal lesions are almost always present. Syphilitic retinochoroiditis comes on during the secondary period, optic neuritis and neuroretinitis are sometimes tertiary lesions. Tarsitis, dacryoadenitis and gumma of the orbit also occur; and 60 per cent. of palsies of the ocular muscles are due to syphilis.

(To be continued.)

Therapeutics.

Treatment of Headache.

Prof. J. C. Wilson, of Philadelphia, gives the following classification for the etiological causes of headache:

1. *Reflex Irritations.*—*a*, the eye; *b*, the nose; *c*, the teeth; *d*, the ear; *e*, the reproductive organs.

2. *Toxemia.*—*a*, infectious diseases; *b*, autointoxication; *c*, drugs—opium, alcohol, quinin; *d*, poisons—lead, tobacco, tea, coffee.

3. *Disturbance of Circulation.*—a, congestions; b, anemia; c, arterial changes.

4. *Neuroses.*—*a*, epilepsy; *b*, hysteria; *c*, neurasthenia.

5. *Organic Disease.*—*a*, syphilis; *b*, meningitis, etc.

Dr. F. Windscheid, of Leipsic, in an article on headaches, states that in no ailment must the causal indication be so closely adhered to as in headache. Consequently, in outlining the treatment of headache as given in the above classification it will not be possible to deal with each class.

As Dr. Collins states, the treatment of headache accompanying the infectious diseases can best be remedied by combating the cause. The treatment of those arising from drugs consists in the discontinuance of those preparations taken therapeutically—mineral or vegetable—proper care, when required by occupation to come in contact with the metals, such as lead, mercury, etc., and the promotion of the elimination of any poison which may be in the system. But, aside from these cases where the treatment is strictly etiological, there are a variety of idiopathic forms which require special treatment.

HEADACHE OF EYE-STRAIN.

℞ Ext. nucis vomicæ ..... gr. viii | 5
Ext. cascaræ sagradæ ..... gr. xii | 8
Ext. gentianæ ..... gr. xxiv 1 | 50

M. Ft. capsulæ No. xxiv. Sig. One capsule every four hours.

℞ Ext. cimicifugæ fluidi ..... ℥i 32 |
Syrupi simplicis, q. s. ad ..... ℥iii 96 |

M. Ft. mistura. Sig. One teaspoonful after each meal.

℞ Butyl-chloral-hydratis ..... ℈i 4 |
Aquæ cinnamomi ..... ℥ii 64 |

M. Sig. One teaspoonful every four hours.

Butyl-chloral-hydrate—croton-chloral—is made by passing a current of chlorin through paraldehyde until saturated. It is soluble in thirty parts of water.

These preparations are indicated only when there are no organic changes in the eyes.

HEADACHE ACCOMPANYING THE MENOPAUSE.

℞ Sodii arsenatis ..... gr. i | 06
Ext. cannabis indicæ ..... gr. iiss | 15
Ext. belladonnæ ..... gr. iv | 25

M. Ft. pilulæ No. xv. Sig. One pill twice daily.

HEADACHE ARISING FROM OVARIAN TROUBLE.

℞ Ammonii bromidi ..... ℥iii 12 |
Ext. hydrastis fluidi ..... ℥ii 8 |
Tinct. gentianæ comp. ..... ℥iss 48 |
Aquæ destil., q. s. ad ..... ℥iv 128 |

M. Sig. One dessertspoonful in water three times a day.

Or,

℞ Ext. cimicifugæ fluidi ..... ℥ 32 |

Sig. Twenty drops in water three times a day.

Cimicifuga is especially indicated in neuralgias or headaches of ovarian origin.

HEADACHE AFTER INFECTIOUS DISEASES.

℞ Pulveris opii
Zinci phosphidi, āā ..... gr. ss | 033

M. Ft. capsulæ No. xx. Sig. One capsule three times a day after meals. —*Collins.*

Or,

℞ Ferri et ammonii citratis ..... gr. xl 2 | 66
Liquoris potassii arsenitis ..... m. xl 2 | 66
Syrupi zingiberis ..... ℥ss 16 |
Infusi calumbæ, q. s. ad ..... ℥iv 128 |

M. Sig. Two teaspoonfuls after each meal in water.

For adults, Dr. Collins prefers liquoris ferri et ammonii acetatis—Basham's mixture—to the citrate.

HEADACHE OF ATONIC DYSPEPSIA WITH LITTLE FLATULENCY.

℞ Sodii arsenatis ..... gr. i | 06
Quininæ sulphatis
Ferri sulphatis, āā ..... gr. xl 2 | 66
Pulveris rhei.
Pulveris zingiberis, āā ..... gr. xx 1 | 33

M. Ft. capsulæ No. xx. Sig. One capsule after each meal

HEADACHE ASSOCIATED WITH FLATULENCY.

℞ Sodii bicarbonatis
Bismuthi subgallati
Pulveris acaciæ, āā ..... ℈i 4 |
Aquæ menthæ pip. ..... ℥ii 8 |
Aquæ destil., q. s. ad ..... ℥viii 256 |

M. Sig. Shake. Two teaspoonfuls before each meal.

RHEUMATIC HEADACHE.

℞ Potassii iodidi
Sodii salicylatis, āā ..... ℥ii 8 |
Vini pepsini, q. s. ad ..... ℥iii 96 |

M. Sig. One teaspoonful three times a day after meals.

℞ Ext. colchici ..... gr. v | 33
Ext. digitalis ..... gr. iv | 25
Quininæ valerianatis ..... gr. xxiv 1 | 50

M. Ft. capsulæ No. xv. Sig. One capsule four times a day.

℞ Chloralis hydratis
Camphoræ
Olei cajuputi, āā ..... ℥i 32 |

M. Sig. Apply locally for the relief of pain in rheumatic or neuralgic headache.

RHEUMATIC HEADACHE.

℞ Salipyrini ..... ℥ii 8 |

Ft. pulveres No. xii. Sig. One powder three times a day.

Salipyrin is composed of antipyrin 42.3 parts and salicylic acid 57.7 parts, therefore it exerts the combined effects. It is soluble in 200 parts of cold water. Reliable authorities state that salipyrin does not produce the bad effects that follow the administration of other similar preparations.

HEADACHE OF GOUT WITH ANEMIA.

℞ Sodii salicylatis ..... ℥iv 16 |
Glycerini ..... ℥ii 64 |
Olei gaultheriæ ..... m. xx 1 | 33
Tinct. ferri chloridi ..... ℥iv 16 |
Acidi citrici ..... gr. x | 66
Liquoris ammonii acetatis, q. s. ad ..... ℥iv 128 |

M. Sig. One dessertspoonful three times a day in water.
—*Solis-Cohen.*

GOUTY HEADACHE WITH ANEMIA.

℞ Acidi salicylici
Ferri pyrophosphatis, āā ..... ℈i 4 |
Sodii phosphatis ..... gr. xii | 72
Aquæ destil., q. s. ad ..... ℥vi 192 |

M. Sig. One tablespoonful in water.
—*Peabody.*

℞ Vini colchici seminis ..... ℥ss 16 |
Potassii acetatis
Potassii iodidi
Tinct. cimicifugæ, āā ..... ℥v 20 |
Aquæ destil., q. s. ad ..... ℥iv 128 |

M. Sig. One teaspoonful every four hours. —*Hare.*

In gouty headache colchicum can be employed with greater freedom, care being taken to keep the bowels freely open.

GOUTY HEADACHE.

℞ Sodii iodidi
Vini colchici, āā ..... ℥iii 12 |
Ext. cimicifugæ fluidi
Tinct. guaiaci ammoniatæ
Ext. cocæ fluidi, āā ..... ℥vi 24 |

M. Sig. One teaspoonful after each meal, in water.

HEADACHE OF UREMIA ACCOMPANYING CHRONIC INTERSTITIAL NEPHRITIS.

℞ Potassii citratis.
Tinct. hyoscyami.
Spiritus ætheris nitrosi, āā ..... ℥iv 16 |
Infusi scoparii, q. s. ad ..... ℥iii 96. |

M. Sig. One tablespoonful three times a day, in water.
—*Collins.*

℞ Potassii acetatis ..... ℥vi 24
Infusi digitalis ..... ℥vi 192
M. Sig. One tablespoonful in water every five or six hours.

This is indicated in headaches accompanying Bright's disease with low arterial tension. Remember that the effect of digitalis upon the heart and arterial system lasts for five or six hours.

BILIOUS HEADACHE.

℞ Tinct. nucis vomicæ ..... ℥ss 16
Sig. One drop in water every ten minutes until twelve drops are taken. —*Ringer.*

℞ Sodii phosphatis effery ..... ℥ii 64
Sig. One teaspoonful one hour before breakfast, in water.

PLETHORIC HEADACHE.

℞ Tinct. ferri chloridi ..... ℥ii 8
Acidi hydrochlorici diluti ..... ℥ss 2
Tinct. cinnamomi
Syrupi simplicis, āā ..... ℥vi 24
Aquæ cinnamomi, q. s. ad ..... ℥iii 96
M. Sig. One teaspoonful one-half hour after eating, three times a day.

℞ Olei eucalypti ..... ℥ii 8
Sig. Five drops every four hours as a preventive or during the attack.

Eucalyptus has been highly recommended in this form of headache where the coal-tar products have seemed deficient or non-indicated.

CONGESTIVE HEADACHE.

℞ Tinct. aconiti ..... gtt. viii |4
Aquæ destil. ..... ℥ii 64|
M. Sig. One teaspoonful every hour until headache is relieved.

℞ Ext. ergotæ fluidi ..... ℥i 32
Potassii bromidi ..... ℥ii 8
Elixiris simplicis, q. s. ad ..... ℥iii 96
M. Sig. One teaspoonful in water three times a day.

℞ Tinct. belladonnæ ..... ℥ss 16
Sig. Six drops every three hours in water. —*Ringer.*

SALINE DIURETIC IN PLETHORIC HEADACHE.

The following is recommended as a saline diuretic in plethoric headache:

℞ Potassii acetatis ..... ℥ii 8
Potassii nitratis ..... ℥i 4
Spiritus juniperis comp. ..... ℥x 40
Aquæ menthæ pip., ad ..... ℥iv 128
M. Sig. One teaspoonful twice daily, followed by an aperient at night.

HYSTERICAL HEADACHE.

℞ Zinci valerianatis ..... gr. xii |75
Ext. belladonnæ ..... gr. iv |25
Ext. gentianæ ..... gr. xxiv 1|50
M. Ft. capsulæ No. xii. Sig. One capsule three times a day.

℞ Tinct. valerianæ
Spiritus ætheris comp.
Spiritus lavendulæ comp., āā ..... ℥iii 12
Tinct. hyoscyami ..... ℥ii 8
Aquæ camphoræ, q. s. ad ..... ℥iv 128
M. Sig. One tablespoonful three times a day.

℞ Tinct. valerianæ ammoniatæ
Spiritus ætheris comp., āā ..... ℥iii 12
Aquæ camphoræ, q. s. ad ..... ℥ii 64
M. Sig. One dessertspoonful twice or three times a day.

NEURALGIC HEADACHE.

Subjects of neuralgic headache are very anemic as a rule and require diet and rest.

For this form of headache the following prescriptions are recommended:

℞ Ferri sulphatis—exsiccated
Potassii carbonatis—exsiccated—āā ..... ℥i 4
Ext. nucis vomicæ ..... gr. viiss |5
Acidi arsenosi ..... gr. i |06
M. Ft. capsulæ No. xxx. Sig. One capsule after each meal, three times a day.

℞ Tinct. nucis vomicæ ..... ℥iv 16|
Liquoris potassii arsenitis ..... ℥i 4|
Aquæ camphoræ, q. s. ad ..... ℥ii 64|
M. Sig. One teaspoonful after each meal, in water.

FOR THE PAIN IN NEURALGIC HEADACHE.

℞ Kryofin ..... ℥i 4|
Ft. capsulæ No. x. Sig. One capsule every three or four hours until pain is relieved.

This preparation is closely allied to phenacetin and should be discontinued when the pain has stopped.

SICK HEADACHE.

℞ Methylene blue
Pulv. myristicæ—nutmeg—āā ..... gr. xxx 2|
M. Ft. capsulæ No. xx. Sig. One capsule four times a day.

Very favorable reports have been published pertaining to the use of methylene blue in the treatment of headache. The nutmeg is used in combination with it on account of its stomachic qualities and its good effect on the bladder.

NERVOUS HEADACHE.

℞ Potassii bromidi ..... ℥ii 8|
Spiritus ammoniæ aromatici, q. s. ad ..... ℥i 32|
M. Sig. One-half teaspoonful every four hours, in water.

℞ Tinct. hyoscyami
Spiritus ammoniæ aromatici, āā ..... ℥ss 16
Syrupi aurantii corticis ..... ℥i 32
Aquæ menthæ pip. ..... ℥ii 64
M. Sig. One tablespoonful three times a day.

℞ Camphoræ monobromatæ ..... gr. xv 1|
Acetanilidi ..... gr. xlv 3|
Caffeinæ citratæ ..... gr. x |66
M. Ft. capsulæ No. xv. Sig. One capsule every four hours.

℞ Antipyrini ..... ℥i 4|
Potassii bromidi ..... ℥iii 12|
Syrupi aurantii ..... ℥v 20|
Aquæ destil., q. s., ad ..... ℥ii 64|
M. Sig. One teaspoonful every three hours until relieved of the headache.

℞ Caffeinæ citrate ..... gr. xv 1|
Ammonii carbonatis ..... gr. xx 1|
Elixiris guaranæ, q. s. ad ..... ℥ii 64|
M. Sig. One dessertspoonful every hour until pain is relieved.

Guarana contains guaranin as the active principle, which is identical with caffein.

NEURASTHENIC HEADACHE.

℞ Zinci valerianatis
Ferri sulphatis
Ext. rhei
Asafetidæ, āā ..... gr. xviii 1|20
M. Ft. pilulæ No. xx. Sig. One pill three times a day.

℞ Ferri lactatis ..... ℥i 4|
Ferri citratis ..... gr. v |33
Ext. nucis vomicæ ..... gr. x |66
Ext. gentianæ ..... gr. xxv 1|50
M. Ft. pilulæ No. l. Sig. Two pills three times a day.

℞ Ferropyrini ..... ℥ii 8|
Ft. capsulæ No. xx. Sig. One capsule three times a day.

Ferropyrin is a compound of antipyrin 64 per cent., iron 12 per cent., and chlorin 24 per cent. It is soluble in five parts of water, and is indicated in headaches with anemia present.

℞ Potassii bromidi ..... ℥i 4|
Ft. chartulæ No. vi. Sig. One powder to be taken in seltzer water two or three times a day.

As a tonic in headache of neurasthenia, the following has been recommended:

℞ Tinct. nucis vomicæ ..... ℥iv 16|
Tinct. cinchonæ comp. ..... ℥i 32|
M. Sig. Fifteen or twenty drops in water after each meal.

℞ Zinci phosphidi ..... gr. iss |09
Ferri redacti ..... gr. xxiv 1|50
Ext. nucis vomicæ ..... gr. vi |40
M. Ft. capsulæ No. xxiv. Sig. One capsule after each meal.

V.3
190

HEADACHE IN BRAIN SYPHILIS.

℞ Tablets hydrarg. chlor. corros., āā....gr. 1-25 |0027
No. xv. Sig. One tablet hypodermically daily.

℞ Potassii iodidi
Aquæ destil., āā.....ʒi 32|

M. Sig. Ten drops after each meal, in water, and gradually increase to the limit of tolerance.

Sodium, ammonium or strontium iodid can be substituted for the potassium if necessary.

℞ Pilulæ hydrarg. iodidi flavi, āā.....gr. 1-5 |012
No. xxiv. Sig. One pill three times a day.

Medicolegal.

Damages Awarded for Fracture of Ribs.—The second appellate division of the Supreme Court of New York holds, in the case of Keiffert vs. the Nassau Electric Railroad Company, that $2,500 could not be considered an excessive award of damages for a fracture of three ribs, resulting in an adhesion which would permanently limit the injured party's power of respiration, and consequently his capacity for labor, it being shown that he was able to earn $11 a week before the accident, and only $9 a week after it.

Ten Thousand Dollars for Injury, Mainly Nervous.—A child 5 years of age was injured, while on the street, by a passing team. According to one of the medical witnesses, there was a concussion of the spine, and injuries to the bladder, resulting in chronic cystitis. His opinion was that the spinal trouble was permanent, but he did not say that the cystitis would be. At the time of the trial, her walk was referred to as a shuffling one, indicating a loss of control of the muscles, or nervous shock and hysteria, as it was variously described, with some other indications of nervous disorder. For such injuries, the second appellate division of the Supreme Court of New York holds in McTague vs. Dowst, $10,000 was not an excessive award of damages.

Approves of Removing Cause of Malarial Fever.—The Supreme Court of the United States says, in the case of Leovy vs. United States, that it thinks a court might well take judicial notice that the public health is deeply concerned in the reclamation of swamp and overflowed lands. If there is any fact, it goes on to state, which may be supposed to be known by everybody, and therefore by courts, it is that swamps and stagnant waters are the cause of malarial and malignant fevers, and that the police power is never more legitimately exercised than in removing such nuisances. Nor does it consider that, because a person has acted under an order of local authorities which did not say anything about the subject of health, as where, for example, such an order simply authorized the erection of a dam, so as to exclude the overflow from a river, that he is therefore to be deprived of the defense to his act that he performed it in order to promote the health of the community, as where the general government charged him with building a dam across a navigable stream without the permission of the Secretary of War.

Reduces Allowance for Injury to Hand.—A young man of about twenty years of age had his left hand injured on a machine which he was operating. He lost the whole of the first or index finger. The first and second joints of the second finger were injured permanently, so that the only use he could have of it would be to "push it down," as it was said. Besides, the first and second joints of his thumb were so injured that motion was considerably limited in the first joint, and partially so in the second joint. But the expert evidence was that the thumb would probably get somewhat better. The jury awarded him $4,500 damages. This the trial judge insisted should be reduced to $3,500. And now the Supreme Court of Minnesota thinks that too much, holding, Stiller vs. Bohn Manufacturing Company, that $2,500 would be sufficient compensation. The question, the supreme court says, was not for what sum of money a person would be willing to submit to such injuries, but what sum of money would reasonably compensate the party, so far as money could compensate him, for his injuries, in view of his age, his earning capacity before and after his injury, the disfigurement of his person, and the pain he had suffered.

Restricting Prostitutes to Certain Districts.—The Supreme Court of the United States has been called on, in the case of George L'Hote and the Church Extension Society of the Methodist Episcopal Church vs. the City of New Orleans, its mayor and superintendent of police, to pass, to some extent, on the validity of an ordinance of said city making it unlawful for any public prostitute or woman notoriously abandoned to lewdness to occupy, inhabit, live, or sleep in any house, room, or closet situate without certain prescribed limits in the city, with a proviso that nothing in the ordinance should be so construed as to authorize any lewd woman to occupy a house, room, or closet in any portion of the city. More specifically, the question presented to the court was whether one who may own or occupy property in or adjacent to the prescribed limits, whether occupied as a residence or for other purposes, can prevent the enforcement of such an ordinance on the ground that by it his rights under the federal constitution are invaded. This narrowing of the question is explained, in part, by the court, with perhaps some significance, as due to the fact that no woman of that character was challenging the validity of the ordinance, nor complaining that she was deprived of any personal rights, either as to the control of her life or the selection of an abiding place. In other words, the court points out that the persons named in the ordinance, and against whom its provisions were directed, did not question its validity. Neither, in the second place, did any person owning buildings outside of the prescribed limits complain that he was deprived of a possible tenant by virtue of the ordinance, or say that the abridgement of her freedom of domicile operated to cut down the amount of his rents. Besides, it calls attention to the fact that the ordinance did not attempt to give to persons of such character license to carry on their business in any way they saw fit, or, indeed, to carry it on at all, or to conduct themselves in such manner as to disturb the public peace within the prescribed limits. Under these circumstances, and with nothing in the ordinance to deny the ordinary right of the individual to restrain a private nuisance, the court does not consider it one of which complaint could be made, by such owners or occupants of property as stated, notwithstanding the pecuniary value of their property might be depreciated thereby. The management of those vocations which minister to and feed upon human weaknesses, appetites, and passions, the court continues, comes directly within the scope of what is known as the police power. Obviously, the regulation of houses of ill-fame, legislation in respect to women of loose character, may involve one of three possibilities: 1, absolute prohibition; 2, full freedom in respect to place, coupled with rules of conduct; or, 3, a restriction of the location of such houses to certain defined limits. Whatever course of conduct the legislature may adopt is in a general way conclusive upon all courts, state or federal. It is no part of the judicial function to determine the wisdom or folly of a regulation by the legislative body in respect to matters of a police nature.

Validity of Exemptions in Practice Acts.—In the case of Scholle vs. State, the Court of Appeals of Maryland gives special attention to the contention that the exemptions of the statutes of that State from the burden of obtaining a license to practice medicine invalidate all of the State legislation regulating the practice of medicine. Those to whom the provisions of the latter do not apply, by reason of these exemptions, are: 1, commissioned surgeons of the United States army and navy and marine hospital; 2, physicians and surgeons in actual consultation from other States; and 3, persons temporarily practicing under the supervision of an actual medical preceptor. The argument advanced was that these exemptions were an unjust and unreasonable discrimination between persons engaging in the practice of medicine, and infringed the right of equality guaranteed by the 14th amendment of the Constitution of the United States. In answer, the court says that, if the conditions surrounding all persons who desired to practice were alike, there could be no differences

made as to the terms upon which a certificate could be obtained. But if there are differences as to conditions and situations, by which it becomes reasonable that greater precautions are required in some cases than in others, classes may be formed by which certificates can be granted to some without examination, and by which others may be exempted altogether from the burden of being registered. But these classes must be created upon considerations only that are promotive of the public interests. If they are so created, they do not constitute an unlawful discrimination, and do not impair the "equal right which all can claim in the enforcement of the laws." And the reasons for the exemptions in question the court thinks are apparent, and are entirely of a public character. The competency of the first class is assured by the exactions required of them before they become commissioned in the service of the United States as physicians or surgeons. So, also, physicians in a marine hospital are selected for their special adaptation and skill for that work. There could be no public reason, therefore, that these medical officers should be required, for the protection of the public, to be registered. Nor can any reason having in view the public protection be assigned for requiring certificates of the remaining classes. Neither of these classes can be said to be practitioners within the state of Maryland. The physician from another state, "in actual consultation," has co-operating with him a registered physician. To require him to license as for general practice would have no other effect than occasionally to deprive the patient and the local physician of the benefit of the advice of some of the most eminent and skillful gentlemen of the profession. Moreover, as to both the second and third classes, the public are fully protected from the incompetency of the foreign physician and the student by the presence and supervision and restraints of the certified physicians of the state. Hence, the court concludes, there can be no objection to these exemptions as in any respect arbitrary or unreasonable, or as in any manner creating any unjust discrimination. Neither does it consider it a valid objection that one of the bodies charged with the duty of appointing one of the boards of medical examiners is the Medical and Chirurgical Faculty of the State of Maryland—a private corporation.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, August 9.

1 Norfolk District Records and Reminiscences, 1850-1900. C. Ellery Stedman.
2 Progress of Medicine. Harold C. Ernst.
3 *Acute Dilatation of the Heart in Influenza of Children. F. Forchheimer.

Philadelphia Medical Journal, August 11.

4 *Military Surgery. W. C. Borden.
5 *Transmission of Tuberculosis Through the Meat and Milk Supply. John J. Repp.
6 Clinical Report of Two Cases of Paralytic Dementia occurring in the Negro. W. K. Walker.
7 Puerperal Eclampsia, with Report of Ten Cases. J. B. Todd.
8 Report of a Case of Rupture of the Perineum in Coitus. R. Abrams.

Medical Record (N. Y.), August 11.

9 *Care of Patients during Surgical Operations; With Some Methods of Preventing Shock and Infection. Fenton B. Turck.
10 *After-Pains from Extraction of Teeth. Charles B. Isaacson.

Medical News (N. Y.), August 11.

11 *Vaccination Eruptions. Jacob Sobel.
12 *Chronic Enteritis and Tuberculous Enteritis treated with Hypodermic Injections of Arsenic. Louis Kolopinski.
13 *School Break-Down. J. Henry Bartlett.
14 *The Automobile in Country Practice. A. D. Hard.
15 Results of Two Hundred Operations on Insane Women. R. M. Bucke.

New York Medical Journal, August 11.

16 *An Investigation into the Causes of so-called Uric-Acid Lesions, and a Rational Therapeusis of the Uratic Diathesis. Alfred Careno Croftan.
17 *Etiology of Diphtheria, and the Value of Antitoxin. A. Robin.
18 The Spectacle and Eyeglass Habit. Alfred W. Herzog.
19 *Relation of Seminal Vesiculitis to Impotence. Ramon Guitéras.
20 Obstetrical "Don't Fails." Charles I. Page.
21 *Diagnostic and Therapeutic Value of Insufflation of the Esophagus, Stomach, and Colon. C. D. Spivak.

St. Louis Medical Review, August 11.

22 Abscess of the Brain. T. C. Witherspoon.

Cincinnati Lancet-Clinic, August 11.

23 Some Dermatological Cases. M. L. Heidingsfeld.
24 Rupture of Lung by External Violence without External Wound. H. H. Spiers.

Virginia Medical Semi-Monthly, July 27.

25 What Constitutes Conservatism in the Treatment of Appendicitis? Hugh M. Taylor.
26 Some Points on Acute Nephritis or Acute Bright's Disease. S. B. Moore.
27 *Alcohol as a Food. A. T. Cuzner.
28 An Aseptic Soap Container. Stuart McGuire.
29 A Physicians' Home. Jno. S. Harris.

Annals of Surgery (Philadelphia), August.

30 *Best Method of Collecting the Urine from the Ureters for Diagnostic Purposes. Malcolm L. Harris.
31 *Critical Survey of Ureteral Implantations. J. Wesley Bovée.
32 Pathology of Fracture of the Lower Extremity of the Radius. Frederick J Cotton.
33 *Tetanus. Alexis V. Moschcowitz.
34 *Malignant Diseases of the Stomach and Pylorus. William J. Mayo.
35 Note on the Relation of the Os Magnum to Tuberculosis of the Wrist-Joint. David E. Mundell.
36 *A Method of Excision of the Shoulder-Joint. John F. Binnie.
37 Report of a Case of Strangulated Obturator Hernia. John Munro Elder.
38 Report of Case of Irreducible Backward Dislocation of the Bones of the Leg at the Knee-Joint. Leonard C. Hull.

Bulletin of the Johns Hopkins Hospital (Baltimore), July-August.

39 On the Present Status of Therapy and its Future. Lewellyn F. Barker.
40 *Comparative Study of Some Members of a Pathogenic Group of Bacilli of the Hog Cholera or Bac. Enteritidis (Gärtner) Type, Intermediate Between the Typhoid and Colon Groups. Harvey Cushing.
41 Charles Frederick Wiesenthal, Medicinæ Practicus, The Father of the Medical Profession of Baltimore. Eugene F. Cordell.
42 1. Primary Carcinoma of the Appendix Vermiformis; 2. Carcinoma of the Appendix Secondary to Carcinoma of the Ovaries. Elizabeth Hurdon.
43 A Case of Transient Spastic Convergent Strabismus. Samuel Theobald.

American Medical Compend (Toledo, Ohio), August.

44 Gall-Stones with a Report of Some Cases Operated. William J. Gillette.
45 The Abdominal Brain. Byron Robinson.
46 Peroxoles in Nose, Ear and Throat Practice. John North.

Kansas City Medical Index-Lancet, August.

47 What is the True Guide for the General Practitioner as to His Talks and Actions. E. H. Miller.
48 Technique of Normal Salt Solution. E. A. Dulin.
49 Notes on the Therapeutic Action of Cystogen. Virginus W. Gayle.
50 Electrotherapy, When Indicated, and its Advantages. F. H. Clark.
51 Non-Medicinal Treatment of Nervous Diseases. John Punton.

New Yorker Medicinische Monatschrift, July.

52 *Die Bedeutung und Behandlung der Kniescheibenbrueche in moderner Beleuchtung. Von Carl Beck.
53 Geschichtlicher Ueberblick ueber die in den letzten 50 Jahren gemachten Versuche, die Gefahren der Star-Extraction zu vermindern. Von Dr. H. Ruschhaupt.

Indiana Medical Journal, August.

54 Convulsions in Children. A. L. Wilson.
55 Treatment of Diseases of the Stomach. Alois B. Graham.
56 *Conclusions Reached after a Study of Typhoid Fever Among the American Soldiers in 1898. Victor C. Vaughan.

Clinical Review (Chicago), August.

57 Treatment of Placenta Previa. J. B. DeLee.
58 *Unusual Manifestations of Malignant Disease. Chas. W. Oviatt.
59 Acute Confusional Insanity—Cerebral Syphilis—Locomotor Ataxia—Combined Sclerosis and Ataxic Paraplegia—Two Cases of Paralysis Agitans—Left Hemiplegia—Right-Sided Hemiplegia. Daniel R. Brower.
60 *Substitute Feeding of Infants, with Special Reference to the Percentage Method, and Home Modification of Cow's Milk. L. Boorse.
61 Radical Cure of Hernia. H. A. Sifton.
62 Erysipelas. John C. Webster.
63 Pernicious Vomiting of Pregnancy. Frank Burr Tibbals.

Dominion Medical Monthly (Toronto), July.

64 *Nasal and Postnasal Synechiæ. J. Price-Brown.
65 Why Medical Men Should be a Court of Justice in Criminal Cases. J. J. Cameron.
66 Valedictory—Read at Trinity Medical College Convocation. Frank C. Trebilcock.

St. Paul Medical Journal, August.

67 *Thrombosis of the Coronary Arteries, with Sudden Death. J. L. Rothrock.
68 Malignant Diseases of the Stomach and Pylorus. Wm. J. Mayo.

69 *Late Suppuration Following Traumatism of the Skull. R. C. Rugan.
70 Report of Surgical Cases. J. W. Wheeler.
71 Some Conditions Affecting the Present and Future Welfare of the Medical Profession. Walter Courtney.
72 *Spasmodic Lateral Curvature of the Spine. Arthur J. Gillette.
73 *Something about the Nature and Treatment of Sciatica. Haldor Sneve.
74 Gynecology as a Specialty. J. B. McGaughey.
75 Case of Aortic Stenosis. J. I. Christison.
76 Case of Rabies. Arthur Sweeney.

Medical Dial (Minneapolis), August.

77 Progress of Renal Surgery. H. B. Sweetser.
78 Some Diseases of the Intestines, Associated with Catarrhal Enteritis. The Principal Features of their Etiology, Morbid Anatomy and Treatment. H. Jefferson Obrien.
79 Compound Fracture of the Elbow—Fracture of the Patella—Compound Fracture of the Patella—Sarcoma of the Humerus, Disarticulation at the Shoulder-Joint. James H. Dunn.
80 Hay-Fever. A. G. Aldrich.
81 Rupture of an Aortic Leaflet in a Case of Right Hemiplegia with Aphasia due to Cerebral Hemorrhage. Augustus A. Eshner.

Bulletin of the American Academy of Medicine (Easton, Pa.), August.

82 *Some Measures for the Prevention of Crime, Pauperism, and Mental Deficiency. G. Hudson Makuen.
83 *The Principles Underlying Specialism and Advertising in the Medical Profession as Formulated by the Special Committee Appointed by the Academy.

Fort Wayne Medical Journal-Magazine, July.

84 *Exploratory Opening of the Spinal Canal and Cranium. Miles F. Porter.
85 Hystero-Myomectomy with Gravid Uterus—Report of Case. George R. Green.

Railway Surgeon (Chicago), August 7.

86 Fractures Involving Joints. Milton Jay.
87 *Gasoline as a Surgical Detergent. Bruce L. Riordan.

Maryland Medical Journal, August.

88 *Tendencies in Medicine in the Twentieth Century. John C. Hemmeter.
89 Retinitis Albuminurica. James J. Mills.
90 *Myotherapy. Nathan Herman.

Yale Medical Journal (New Haven, Conn.), August.

91 *Bronchial Asthma, Its Relation to Nasal Disease. Henry L. Swain.
92 The Physician. S. Weir Mitchell.
93 Address of the President of the Yale Medical Alumni Association. George Rubens Shepherd.

Atlanta Journal-Record of Medicine, August.

94 Splenectomy for Congestive Hypertrophy. J. Wesley Bovée.
95 Continued Use of the Antiseptic and Eliminative Treatment of Typhoid Fever without any Deaths. T. Virgil Hubbard.
96 Address to Graduates of the Grady Hospital Training School for Nurses. Virgil O. Hardon.
97 Danger to the Eye while Chopping with a Hoe. W. L. Bullard.
98 Treatment of Neuralgia. Robert C. Keener.
99 The "Christian Science" Bubble. C. A. F. Lindorme.

Medical Times (N. Y.), July.

100 National Volunteer Emergency Service Medical Corps. Its Objects, Scope and Importance. J. Adelphi Gottlieb.
101 Shock. H. Gasser.

Cleveland Medical Gazette, August.

102 Submergence of Individual Judgment. T. Clarke Miller.
103 *Appendectomy in the Quiescent Period. William E. Lower.
104 *Convulsions in Children. Wm. A. Dickey.
105 *Use of Rubber Gloves and Gauntlets as a Means of Preventing Infection in Surgery. Hunter Robb.

Medical Council (Philadelphia), August.

106 On the Value of Cinnamic Acid in Pulmonary Tuberculosis. A. Ik P. Leuf.
107 *Points in Surgery. Wm. V. Morgan.
108 Preliminary and Minor Railway Surgery. J. M. Salmon.
109 Typhoid Fever. S. M. Dorris.
110 Functional Disturbances of the Heart Caused by Obstruction in the Digestive Tract. J. D. O'Brien.

Charlotte Medical Journal, July.

111 Annual Address Before the Graduating Class of North Carolina Medical College. J. Howell Way.
112 Natural Labor. H. Plummer.
113 Obligations of Humanity to the Medical Profession. Benjamin K. Hays.
114 Whooping Cough. J. A. Regan.
115 The Physician and the Manufacturer of Pharmaceutical Preparations. Ethics of their Relation. M. L. Stevens.
116 Ophthalmic Economics. Edward W. Wright.
117 La Grippe. A. M. Ballard.

Southern California Practitioner (Los Angeles), July.

118 A Product of "Mortal Mind." E. S. Goodhue.
119 *Is the Course of Study in Our Public Schools Detrimental to the Health of Pupils? J. C. King.
120 Ptosis. Geo. J. Lund.
121 *Transmission of Typhoid and Its Prevention. L. M. Powers.
122 Fractures of the Neck of the Femur. F. C. Shurtleff.

Georgia Journal of Medicine and Surgery, August.

123 Splenectomy for Congestive Hypertrophy. J. Wesley Bovée.
124 Some Points in the Prevention of Infection in Post-Operative Dressing. Wm. J. Little.
125 Ectopic Pregnancy. J. G. Carpenter.

New England Medical Monthly (Danbury, Conn.), August.

126 Some Observations on Lithemia. Arch Dixon, Jr.
127 *Why I Use Pepto-Mangan "Gude." An Experimental Demonstration. Wm. Krauss.
128 Forty Cases of Gonorrhea Successfully Treated. Some Uses of Mercurol. F. Gray Blinn.
129 Backaches: Their Causation and Treatment. H. P. Mansfield.
130 Incontinence of Urine in Childhood and its Treatment. William C. Wile.
131 Suggestions on the Causative Relationship Between Uricacidemia and Urticaria, with Report. Halcyon A. Wilbur.
132 Treatment of Pneumonia in Children. Robert C. Kenner.
133 Brief Inquiry into the Etiology and Treatment of Hay-Fever. Edwin Hank.

The Laryngoscope (St. Louis), August.

134 *Physiology of Voice Production. W. Scheppegrell.
135 *Auricular Cataphoresis. Gherrardo Ferreri.
136 *Physiologic Tests as Aids to the Differential Diagnosis of Lesions of the Ear which Produce Deafness and Tinnitus. Wm. Lincoln Ballenger.
137 Nasal Polypi in the Naso-Pharynx. J. M. Ingersoll.
138 *Strong Carbolic Acid Used by Mistake as a Throat Spray. D. H. Galloway.
139 Antero-Posterior Curette-Forceps for Removal of Adenoids. W. A. Martin.

AMERICAN.

3. **Acute Influenzal Dilations of the Heart in Children.**—Four cases are reported by Forchheimer, in all of which the direct cause of the trouble appeared to be heart strain. In two of these there was a predisposing weakness of the myocardium. He thinks we are justified in assuming two forms of heart dilation in influenza: 1. A form produced primarily by action of toxins on the nervous system or heart, and possibly on the myocardium. 2. A form occurring in such conditions in which the outflow of blood is materially interfered with by mechanical conditions. The first form may terminate fatally, but in his own experience it was not the case. The second form is more permanent, but in children generally tends to recover.

4. **Military Surgery.**—Borden describes the different arms used in military operations and shows that it is probable that as many deaths on the battlefield will occur with modern weapons as with the ones of the past. The mortality of the wounded, however, will be greatly lessened by the small-caliber, modern, small-arm projectile, which produces over 90 per cent. of the injuries in war. The special disturbing effect of this bullet in passing through fluids or semi-fluids in confined spaces, its action on the bones, etc., are all discussed and illustrated.

5. **Tuberculosis.**—The veterinarian of the Iowa State Agricultural College, Dr. Repp, reviews the literature as to infection, experimentally and clinically, by tuberculous meat and milk, and argues that the transmission to man has been sufficiently proved, giving all the facts that he has been able to collect on the subject. They are not nearly as numerous as the experimental ones of transmission from animal to animal, but he sums up his evidence as follows: 1. That tuberculosis may be transmitted to animals through their eating the meat of certain other animals which are tuberculous or by their being inoculated with it. 2. That tuberculosis may be transmitted to animals through their ingestion of the milk of certain cows which are tuberculous, or by their being inoculated with it, both when the udder of the cows is diseased and when it is healthy. 3. That, therefore, the meat and milk of certain tuberculous animals contain living, virulent tubercle bacilli. 4. That the tubercle bacilli of cattle are pathogenic for man. 5. That, therefore, the meat and milk of certain tuberculous animals have a tendency to produce tuberculosis in human beings who use these products as food. 6. That there is no evidence that the converse of these conclusions is true.

9.—See THE JOURNAL, xxxiv ¶ 23, p. 1462.

10.—**After-Pain from Tooth Extraction.**—Isaacson thinks that the painful sensations often felt after tooth extraction are

due to retention of the pyogenic membrane, expansion of the osseous walls, fracture of the alveolus, retention of the root and spicule, and special conditions due to inflammation and suppuration. He uses the burr to take out the root when it can not be reached by the forceps or is too small, and the use of ethylic chlorid or cocain injection rather than nitrous oxid, which is too temporary in its effects. The chief point of his paper is that these pains are nearly always caused by foreign substances and that removal is preferable to any local treatment that can be used.

11. **Vaccination Eruptions.**—According to the statistics of the dermatologic clinic at the Good Samaritan Dispensary at New York, Sobel finds that about 14 per cent. of the cases present complications or sequelæ and about 2 per cent. generalized eruptions. The most common, generalized eruption was found to be urticaria, sometimes combined with contagious impetigo due to scratching. These urticarial lesions occurred as early as the third or fourth days after inoculation. The morbilliform type, though not very frequent, occurred in several instances, usually ten or eleven days after vaccination. The eruption was differentiated by the history of sudden onset and early disappearance of the rash with desquamation within forty-eight hours. In two or three instances he says he observed conditions very closely resembling rötheln. Of the vesicular eruptions some simulated chicken-pox very closely. He thinks it possible that it may have been complicated with that disease. General scarlatiniform eruptions or pustulobullous lesions were several times entered on the records. Some cases suggested syphilis, others echthyma, conjoined, erythema multiforme and papulo-vesicles, scarlatina, erythema and minute vesicles, urticaria and erythema multiforme, were also met with.

12. **Arsenic in Chronic Enteritis.**—Kolopinski advises the use of arsenic in small doses—1/64 to 1/32 gr.— hypodermically in 60 minims of normal salt solution. This treatment must be associated with regulated diet, excluding desserts, fruits and preserves and allowing milk, cocoa, chocolate, etc. Favorable results are in all cases most certain to be attended by exclusive diet of milk and cocoa. The good effects of treatment are not always certain and he has had some non-successes. On the whole, however, he concludes that this method is safe, painless and effective. The dose is very small, as given above. One, two or three injections per week will cure the milder cases. Other internal medication is avoided and the patient has no daily routine of dosing. Greater latitude of diet can be allowed without detriment.

13. **School Break-Down.**—Noticing a rather sensational article in a lay journal Bartlett analyzes the facts in regard to school break-down in a conservative way. He thinks the assumption that so large a number of cases are due to overstudy is not warrantable and points out other practices and habits that have much to do with the trouble. Most all of these cases occur during the developmental periods. The development processes are more to blame than overstudy. Errors of diet, sleep, etc., are mentioned as probable causes. He thinks that the strain of examinations and pressure of unnatural stimuli in school life are against a rational school system and not the fruits of it, and that we should study the subject of adolescence rather than try to bring about a revolution in our school practice.

13. **The Automobile in Country Practice.**—Dr. Hard, who has the degree of M.E., as well as M.D., notices the different types of the automobile as adapted to the country doctors' use. The electric motor he rejects on account of its weight, limited radius of action and unsuitability to country roads. The hydrocarbon system has the similar disadvantages of weight, unsuitability to country roads and is also disabled in very cold weather. When it breaks or sticks it is almost impossible to get it to work again. It has some good features. It does not depend on an independent power-plant; its expense is slight; it can be left safely standing and does not leak power when it is not in use like the electric vehicle. There is but little danger connected with its use and its manipulations is easily learned by the average individual. The steam-driven carriage is the one with which he has had the best results, but it requires a skilled mechanic. If it breaks down in one part the whole is disabled. The boiler is constantly trying to commit suicide and it is difficult sometimes to keep up steam. Cold weather interferes with the steam production. Unless a careful selection of water is made the boiler foams and blows out its flues. The machinery is all exposed to the dust and it can not be left standing, as it will noisily blow off steam, and if the fire is turned out it takes time to start it. Is advantages are: that it is is more powerful, has a wider radius of action and can be watered as conveniently as a horse. Many of the defects admit of correction, and when a steam generator is put into use which instantly converts into steam small and variable quantities of water so that the power may be produced at will without a reserve supply of water and steam in the boiler there is no apparent reason why all of the objections found in the steam carriage of to-day may not be successfully met.

16. **Uratic Diathesis.**—Croftan reiterates some views formerly expressed as to the non-toxicity of uric acid and the importance of alloxuric bases as the peccant material in so-called uric acid poisoning. These, he thinks, are derived from the nuclein of the white corpuscles and are the results of an inincreased nuclein catabolism. The practical therapeutic points to be looked after are: 1, increased limitation of the toxins as they are formed; 2, to reduce the nuclein catabolism; 3, to increase the processes of oxygenation. The use of alkalies and dietary regulations have proved of value. The alkalies produce an increased elimination of the uric acid and alloxuric bases. The diet, which has been variously handled heretofore, should be such as to exclude the nuclein-containing substances as far as possible, especially those forms that are liable to produce the alloxuric bases, the interdiction of alcohol and tea. The raising of the oxygenation power of the cells can be obtained by a general tonic treatment according to individual needs. Here also massage, hydrotherapy, electrotherapy, etc., have a field. The importance of increased oxidation is to be shown by the benefit produced in uratic cases by oxygen inhalations, and the author gives a tabulated statement of the urine constituents before and after oxygen inhalation in several cases as illustrating this point.

17. **Diphtheria.**—Robin replies to the recent paper of Dr. Herman that antagonizes the antitoxin therapeutics. This article is largely a statistical one and is very severe in its criticisms of Herman's methods and ideas. He shows apparently conclusively that antitoxin is a valuable resource in therapeutics and sums up his paper by giving the necessary qualities of a specific and its action. Antitoxin, he says, cures every case of experimental diphtheria in which the amount of toxin is known. It cures from 75 to 90 per cent. of all cases of human diphtheria in which the amount of toxin circulating in the blood is not known. It reduced the mortality to 10 to 15 per cent., the lowest point ever recorded throughout extensive areas, and has kept it there since 1894. It does the work without the addition of any other medication, although in man symptoms are usually combated with drugs.

19. **Seminal Vesiculitis.**—Impotence, according to Guitéras, is largely due to inflammation of the seminal vesicles, though there may be other predisposing causes such as chronic inflammation of posterior urethra, chronic prostatitis, varicocele, etc. He reports cases illustrating his views and the treatment of the condition, which is a sedative one, at first avoiding anything that is stimulating or exciting in the sexual sphere, with internal remedies to neutralize the urine in case of over-acidity. He uses rectal irrigation every night, with normal salt solution or strained flaxseed at a temperature of 105 to 120 F., by means of the double-current rectogenital tube and massage of the internal genitals every five days followed immediately by urethral irrigation whenever there is chronic prostatitis and posterior urethritis associated with the condition. After the irritation and inflammation have been removed, stimulation by drugs, electricity, and regulation of hygiene is employed.

21. **Insufflation of Stomach and Colon.**—Spivak describes his method of stomach insufflation as well as that of the colon and esophagus, and discusses its diagnostic importance. The

therapeutic uses of the method are also noticed. He is experimenting at present with insufflation of hot air in the stomach in various gastric disorders, but does not wish to report premature conclusions. He suggests the use of insufflation as a means of pushing down foreign bodies in the esophagus as less dangerous and forcible than the use of the bougie. He will also use insufflation in his next case of esophagismus.

27. **Alcohol as a Food.**—Cuzner reviews the facts and theories as to the food value of alcohol, with special reference to the recent statements of Prof. Atwater and the contradictory ones that have since been published. He holds that while Atwater is probably understood by the medical profession, to the public his statement appears as an endorsement of the dietetic use of alcohol, but that he will himself agree with the statement that it is only a food to a very limited extent and not properly one in a general sense, and that it is more properly classed as a narcotic poison. Cuzner maintains that we must still keep it in the list of the latter and not admit it in any way to the category of alimentary substances.

30. **Urine from Ureters.**—Harris discusses the different instruments for collecting urine, showing their advantages and disadvantages. In considering catheterization of the ureter he points out that it requires a sufficient transparency of the media for its use, which is not by any means always insured, and that the extravesical conditions such as displacements by tumors may so distort the base of the bladder as to render the introduction of the catheter impossible. It may become clogged with pus and may produce spasm of the ureter. It is apt to produce a certain amount of mechanical injury; a little blood at first is the rule, and it does not collect all the urine. Another thing to be considered is the danger of infection, in cases of cystitis for example. The segregator requires the same conditions as those requisite for the cystoscope. The bladder must be large enough to allow the instrument to be opened and the ureter must be large enough to admit its introduction. As the sight is not used in guiding it the transparency of the media is not important and conditions within the bladder, such as folding of the mucous membrane, etc., which might interfere with catheterization do not effect its usefulness. Large fibroid growths may prevent its application and great thickening of the trigone so that it can not be raised to form a septum, or where a so-called middle lobe projects into the bladder, displacement or distention may interfere the same as with catheterization. He points out cases illustrating the reliability of the septum produced and he maintains that the bladder can be so cleansed as not to contaminate the urine in its passage from the ureter to the container. It may excite hemorrhage from the bladder wall, but it is an exception if the bladder is healthy. The advantage of the segregator is that all the urine that escapes from the ureters is collected in the vial, none is lost as in the catheter. He does not try to claim that it is always successful and that it can take the place of every other device. It has its limitations, but for differential diagnosis in certain tumors of the abdomen, for determining which kidney is diseased and the functional capacity of each, whether the bladder be affected or not, for differentiating between certain bladder and kidney affections, it gives results that are perfectly reliable, as has been repeatedly demonstrated. Furthermore it is safer than the catheter, as it never infects the healthy kidney.

31. **Ureteral Implantations.**—This extensive review of the operative procedures in cases of injury to the ureter covers pretty nearly all the published facts. The author describes the different methods of uniting or implanting the ureter. He says it is impossible to have the anastomosis between the ureter and bladder as good as the natural one because the small muscles at the end of the ureters and lost in the wall of the bladder and internal meatus can not be utilized. Whenever the ureter requires grafting above the brim of the pelvis its implantation into its fellow is to be considered, though where this is impracticable loosening of the kidney is the next step, and if this can not be done implantation into the bowel is the next. Rectal implantation is discussed and Bovée thinks that it is probable that the carefully made oblique and longitudinal grafting may have the desired effect, but infection is always to be feared. Where the Maydl and Pozza modifications are practicable in cases of implantation of both ureters they should be used. Skin implantation of the ureter is rather condemned, it is not an alternative for bladder or ureteral anastomosis or even bowel implantation. It may be done in cases of a very short stump when it is impossible to unite the two ureteral ends, but if there be but one kidney, bowel implantation is preferable. Implantation of the ureter into the vagina seems to the author only incurring permanent disability. The urethral grafting of ureters has been done in a few cases, but Bovée believes it has but a limited field and that it is a failure as a substitute for the Maydl operation.

33. **Tetanus.**—Moschcowitz favors the nerve-transmission theory of tetanus, though he admits that it can not be absolutely proved. It is supported by Stintzing's finding that the cerebrospinal fluid is toxic in tetanus and produces the disease by inoculation while the blood appears not to be. He gives a complete list of all cases of antitoxin treatment of tetanus that he has been able to collect and quite a lengthy bibliography of the later papers on the subject.

34. See abstract in THE JOURNAL XXXIV., p. 1259.

36 **Excision of the Shoulder-Joint.**—The method here described by Binnie consists first in exposing the joint by Ollier's method, then abducting the arm and have the assistant hold it at nearly a right angle to the axis of the trunk. From a point one-half inch below the clavicle and beside the coracoid he makes an incision four and one-half to five inches in length downward and outward toward the insertion of the deltoid, dividing the skin and subcutaneous tissue. Distinguishing the outer border of the deltoid he incises the deltoid a little to the outside of and parallel to its internal margin, thus avoiding injury to the cephalic vein and large branch of acromiothoracic artery. He then retracts the outer side of the wound and exposes the head of the humerus. Step 2. Rotate the arm so as to show the bicipital groove; incise the joint capsule throughout its whole extent parallel and external to the bicipital tendon. Place a chisel in position against the outer margin of the bicipital groove and cut the great tuberosity apart from the shaft. Reflect outward this detached shell of bone with all its connections, both tendinous and periosteal. Lift the long head of the biceps outward after freeing it from its synovial sheath. With the chisel cut the lesser tuberosity free from the shaft of the humerus and retract inward with its connections and through the long head of the biceps. Deflect the head of the humerus into the wound, at the same time severing its posterior attachments with elevator or scissors as usual. The rest of the operation is completed in the usual manner, the shells of the bone left are inspected and if diseased removed, otherwise replaced. In replacing, one or two points of suturing are used, uniting their non-osseous connections, and they should be so placed as to keep the long head of the biceps superficial to them. He claims his operation is so simple and saves so much time that he believes it is worthy of being offered to the profession.

40. **Bacillus O.**—Cushing describes cases in which a bacillus intermediate between the typhoid and colon types seems to be responsible. He has studied this organism thoroughly and gives results. It belongs to the group with the morphology of B. typhosus, but with alkaline milk-reaction, gas-producing with glucose and often distinctly pathogenic to man and animals. Its fermentative reactions, the results of inoculation, etc., are all elaborately worked out.

52. **Fracture of the Patella.**—Beck operates for this injury when separation of the fragments occurs, by inserting silver wire sutures around the parts to bring them together, insisting especially on the strength of these; they should be larger than will go through an ordinary needle. They should pass through the quadriceps tendon and ligamentum patellæ. The skin incision should be of semilunar form and go directly over the ligamentum patellæ from one epicondyle to the other, thus forming a convex flap which can be reflected backward. It is not necessary to touch the wound at any time with the fingers. The needle can be held with a needle-holder, and the wire ends twisted with the forceps and blood-

clots washed out by an irrigation stream. The skin suture should be made with boiled formalin catgut, and a simple bandage applied or a fenestrated plaster splint. The wire can be removed through the fenestrum in about five weeks. The patient should still be kept quiescent for a week longer and then allowed to move cautiously.

56. This article has appeared elsewhere. See THE JOURNAL, xxxiv, p. 1451.

58 See abstract in THE JOURNAL of July 7, p. 51.

60. See Ibid.

64. **Nasal and Postnasal Synechiae.**—In this article Price-Brown treats of the subject of fibrous, bony or cartilaginous bands that unnaturally connect together the opposite walls of the nasal and postnasal cavities. They are most frequent between the middle turbinate and septum; next between the inferior and the septum. In the nasopharynx the synechia is usually found connecting the lip of the one or other of the Eustachian tubes, or some part of the pharyngeal vault. Their causes are, he believes, always traumatic, either directly or indirectly. The electrocautery or galvanocautery is amongst surgical causes the most prominent. They are due also to prolonged existence of turbinal hypertrophy, and sometimes no history can be traced, but close inquiry generally reveals reason for their origin. Special types of them are noticed and the prognosis is best when the cavity is wide in which the synechia is formed. He has found the saw the most useful instrument in their treatment, and to keep the parts open he uses cotton-wool tampons soaked in albolene. In fibrous cases the knife or scissors are the most useful. The hemorrhage that occurs at the operation is, he thinks, an advantage.

67. **Thrombosis of the Coronary Arteries.**—Rothrock reports two cases of thrombosis of the coronary arteries, and gives a general discussion of the subject as it has been developed in the literature of this country and elsewhere. In neither of these cases did the thrombosis entirely occlude the vessel, but in both it was well organized, suggesting slow formation, and death occurred during exertion, which is to be explained by the sudden strain put upon the heart. The cause of the sudden deaths is discussed and the author thinks that these cases probably belong in the category of angina pectoris. In one there has been previous angina attacks. In regard to the diagnosis there is nothing characteristic, but as the disease has been invariably fatal this is not so important.

69. **Suppuration Following Traumatism.**—Dugan reports the case of a man who was bruised by being thrown from a wagon, but was not aware of any head injury occurring. Later a suppuration developed from a fracture on the external and internal tables, discovered by operation. The curious fact about the case was that the man was bald, but had no mark on his head to show the injury. Recovery was uneventful.

72. **Spasmodic Spinal Curvature.**—A case of hysterical spinal curvature is here reported by Gillette, who discusses the diagnosis. Lack of pain in walking, no organic change in the vertebræ, even after years of mal-position, differentiated it from Pott's disease. Rigidity of the spine and muscles was the only condition which could possibly suggest spasmodic paralysis. There was only one long curvature instead of the double curvature, and not the rotation of the vertebræ existing in true lateral curvature.

73. **Sciatica.**—Sneve recognizes three types of what is generally called sciatica: true neuritis, perineuritis, myositis. The former is generally caused by some general infection or a toxin, or from compression from a tumor or growth. Perineuritis is probably due to the same cause that produces inflammation in the aponeurotic structures elsewhere in the body, such as gout, rheumatism, etc. Myositis is due to cold or hard muscular over-strain. True sciatic neuritis, he believes, is recovered from in from six months to two years, according to the amount of injury to the nerve. Perineuritis, which probably always includes neuralgia of the sciatic nerve, can usually be relieved in from one to six months, but it is very apt to recur. Myositis is usually recovered from in one to six weeks. Its pathology is not well known. The treatment of true neuritis is rest, with splints, hydrotherapy and anodynes. Perineuritis is treated by the same remedies as used for the ordinary condition of rheumatism, gout, etc., also local treatment in the way of the cautery, manipulation, etc., and he has used the method of stretching the nerve by external manipulation as a routine treatment. The sciatic-myositis he treats as a rule by the same methods as perineuritis.

82. **Treatment of Defectives.**—Makuen treats of the measures that should be taken to eliminate degeneracy, favoring state regulation of marriage, asexualization in certain instances, prison reforms, etc., educational improvements, etc. Preserving of the unfit has been so much the aim of the past that we have neglected the fact that they are reproducing and multiplying. He would look out for this by stringent marriage laws, removal of the power of procreation, and restriction of immigration.

83. **Specialism.**—This paper is the report of the committee of the American Academy of Medicine in regard to specialism, the general points of which are that it is not only unavoidable but is desirable and that it is proper for the physician to seek to perfect himself in the line of his greatest ability even to the neglect of other fields of practice. The specialist may practice directly, or indirectly through consultation, and in his ordinary practice he ought not to be an exclusionist. In his consultation practice the specialist stands in a different relation to his fellow physician from that of other general practitioners in consultation. He is rather a coadjutor than a consultant, and should follow the requisites of the family physician and not interfere with treatment until desired to do so. If a specialist limits his study to a particular branch because his aptitudes for that are of greater service to his profession, and carries into his limited practice the ethical principles of a doctor and gentleman, he can not be a cause of discord or trouble. When the physician should begin to limit his practice can not be settled as a rule. If his specialty requires operative skill he must begin early, but if he does not have actual experience in general practice he will fail to realize the importance of many things and be too much of an exclusionist. The report also takes up the subject of advertising, and holds that the first object of the physician should be the service to humanity, and next to this his duty to himself to make a living, but this order must not be reversed. Any method of advertising which only seeks to inform the public that the advertiser is ready to be of service, is admissible. The careful application of these principles will demonstrate the true character of any act on the part of the physician which calls the attention of the public to him.

84. **Exploratory Operations on the Spinal Canal and Cranium.**—Porter concludes that the opening of the spinal cavity and exploration of the brain and cord when properly done is accompanied by slight risk and is absolutely necessary in many cases before the diagnosis can be made. We should always remember that delay in diagnosis is often more dangerous than operation, and the rule should be about the same in like conditions of the abdomen. When in doubt, open and examine with the assurance that the possibilities for good far outweigh the possibilities for harm.

87.—This article was appeared elsewhere. See THE JOURNAL of July 14, lxxxix, p. 123.

88. **Twentieth Century Medicine.**—Hemmeter reviews the past and speculates somewhat on the future of medicine. He thinks that what we are to look forward to will be a greater development in certain lines, such as hygiene; the concentration of the population in cities will be discouraged; dwellings will be made more sanitary; the x-ray and other similar discoveries will be improved and enlarged upon and the state will control marriage relations for the general and individual welfare more than at the present time. He rather inclines to think that operative surgery has at least in certain lines reached its limit; surgery for carcinoma, for example, has no greater future, and that we must find out other methods of meeting this scourge through medicine and pathology.

90. **Myotherapy.**—The medical use of massage forms the subject of Herman's article. He thinks its usefulness is largely

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limited to the afebrile conditions. It is indicated for the removal of exudates, infiltrations, to overcome stasis and improve local circulation, for the after-treatment of fractures, for the treatment of some forms of paralysis, correction of deformities and for a long list of ailments which this agent affects or benefits in a curative or prophylactic way.

91. **Bronchial Asthma.**—Swain studies the causes and pathology of asthma, rejecting the vasomotor theory and holding to the view of spontaneous contraction of nervous origin, of muscle fibers of the finer bronchioles causing congestion, so to speak, of the air in the vacuoles of the lungs. The reflex relations between nasal disease and bronchial asthma are discussed and he thinks the nose is only one of the factors in its causation. Asthma, he says, is a bronchial spasm brought on usually through certain exciting causes by the explosive neurotic condition of the nervous system. We should not, therefore, look for its cause in any single organ for the explaining of all attacks.

103. **Appendicitis.**—Lower believes the operation for appendicitis should be as soon as the diagnosis is made, if the surroundings are favorable, and if the patient has passed through one attack he should not be allowed to have a second, but an operation in the quiescent period should be performed. He thinks by operating in this period there is less danger to life, a shorter period of disability and smallest danger of complications.

104. **Convulsions in Children.**—Dickey's paper is a plea for the use of the cold bath rather than the time-honored hot one. In case of infantile convulsions he would methodically sponge the entire body or put the child in a bathtub with a temperature of 80 or 90 F., keeping up brisk friction in the meantime. An injection of cold water into the rectum will also be beneficial. During paroxysms chloroform can be justifiably used by an expert, not by the nurse. An enema will often bring away irritable matter and the stomach-tube may be useful in certain cases.

105. **Rubber Gloves in Surgery.**—Robb reports that it is only within the last year or two that he has learned to appreciate the advantages offered by the rubber sleeves, though he has been using the gloves for some five years. He attributes the favorable results in his operations largely to these appliances which relieve the physician of the embarrassment of the impossibility of thorough asepticizing the skin.

107. **Points in Surgery.**—The points alluded to are: An improved method of circumcision; a mnemonic device for remembering the nerve-supply of the hand; immobilization of the foot at right angles to the leg in cases of ankle injury; the value of the X-ray in hydrops ventriculi, and joint tuberculosis; phosphorus for rachitis; over-treatment of gonorrhea, and elimination of the surgical treatment for the majority of cases of varicocele.

119. **School Strain.**—This article is the discussion of a number of answers to queries sent out to teachers and others by the author, from which a rather remarkable variety of opinion was secured. One even went so far as to say that we can not make the average child study hard enough to harm it, and if some that are not average are injured what matters, the greatest good to the greatest number must be secured. Dr. King himself does not express a very positive opinion as to the reforms that are required, but he thinks it would be a good thing if medical men could inspect cases of children that seem to be suffering from the effects of school strain, at the same time informing the teachers, who would soon begin to realize the importance of the situation. As regards the question as to whether the boy or girl at and beyond puberty be required to do the same school work, King says that he would say "Yes," under certain conditions, viz., that the girl should be treated on the same conditions as boys, not sought to be made a lady of before her time.

121. **Typhoid Fever.**—Powers insists on the importance of more thorough disinfection in cases of typhoid so as to destroy the bacteria given off from affected persons. All their dejecta should be thoroughly sterilized with disinfectant solutions, all sewage should be sterilized before turning into any stream which may be used for any other purposes. No water should be used from a well located within 200 feet of any cesspool or vault, without having been boiled, and no typhoid fever patient or convalescent from typhoid should be allowed to be about any dairy or any place where milk or its products are marketed. All streams which supply water for domestic purposes should be thoroughly patrolled to prevent pollution.

127.—This article has appeared elsewhere. See THE JOURNAL, XXXIV, title 114, p. 1249.

134. **Physiology of Voice Production.**—According to Scheppegrell the difference in the use of the voice of singing and speaking is one of degree rather than kind. The average singer uses a greater range of pitch and the measure is more prominent than in speaking, as is also the length of the sustained vowel sounds, though both of these are present to a greater or less extent in the ordinary speech. The distinction between the classes of voices which we call soprano, mezzo-soprano, contralto, etc., is best expressed in the French term *timbre*, which refers to the difference that we observe, for example, between two instruments which may be of exactly the same tone and intensity, but differ in the character of the sound wave and not their rate of strength. In regard to the technique of voice production, the method of respiration plays the greatest part. He condemns the clavicular and lateral or costal method of breathing in singing; the abdominal or diaphragm method is the preferable one. Another point is the question of placing of the voice or adjustment of the larynx; the majority of singers with untrained voices use the larynx in the elevated position so that they do not get the full benefit of the re-enforcement of sound by the acoustic properties of the chest. The voice is a little softer, perhaps there is the gain of a few upper notes, but it is usually defective and weak. The same applies to speaking, and is the cause of the breakdown of many public speakers. It is largely learned by imitation by the child or youth about puberty, who follows the example of those about him. The speaking voice should be placed as low as the voice will permit so that it can be used without undue strain of the muscles or vocal cords and other muscles, and yet not so low as to prevent change in the inflections of the voice in giving expression to speech.

135. **Auricular Cataphoresis.**—From the results of experiments Ferreri concludes that under the action of an electric current the medicaments applied to the tympanic and mucous membrane of the cavity are not absorbed, and that galvanic cataphoresis is not an efficient resource in ear diseases. He admits his experiments do not justify absolute conclusions, but they show the necessity of further study.

136. **Physiologic Tests in Ear Lesions.**—Ballinger illustrates by cases the value of physiologic tests in the differential diagnosis of lesions of the ear, and while not claiming that the diagnosis can not be made without their aid, he believes that in many cases it will fail. While not of equal value with ophthalmoscopic examination of the fundus they are the best at the command of the otologist and should be used in combination with all other methods of differential diagnosis.

138. **Carbolic Acid in the Throat.**—Galloway reports a case where through an error or carelessness in labeling of the drug a 95 per cent. solution of carbolic acid was used as a spray for a man suffering from severe tonsillitis and pharyngitis. The mistake was recognized almost immediately, and equal parts of alcohol and water were applied by the same method and followed by mucilaginous drinks. The patient recovered in about a week, minus his tonsillitis.

FOREIGN.

The Lancet, August 4.

A Case of Meningomyelitis With Bacteriologic Examination of the Spinal Cord. GEORGE R. MURRAY and W. HAIRDCASTLE.—The authors describe a case of meningomyelitis apparently following exposure and exertion, and following the usual course, in which microscopic examinations of secretions of the cord showed the presence of what they recognized as a sort of oval motile bacillus, staining often most strongly at the ends and then resembling a diplococcus. It stained readily with aniline dyes and could with care be stained

with Gram's method. It is found in large numbers in the pia and in lesser numbers in the substance of the cord. Pure cultures were obtained from both, and inoculation experiments showed it to be pathogenic to the guinea-pig and locally also to the rabbit. They report the case as bearing on the infective nature of meningomyelitis and refer to other cases in which somewhat similar findings have been recorded by Buzzard, Risien Russell and Trevelyan. They think the evidence goes a long way to show that acute disease of this character is probably infective, though it can not as yet be attributed to any single organism, but the bacilli that have been found in recorded cases have certain characteristics in common.

A Blood Reaction in Diabetes Mellitus; Its Cause and Diagnostic Value. R. T. WILLIAMSON.—The writer recalls that in 1896 he recorded a reaction which he believes to be peculiar to the blood of patients suffering from diabetes mellitus. A drop of blood taken from the finger decolorizes a warm alkaline solution of methylene blue when mixed in certain proportions, while the blood taken from healthy persons or from individuals suffering from other diseases has no such action. The reaction is due to the greater reducing power of diabetic blood, and is obtained as follows: At the bottom of a small narrow test-tube is placed a drop of water—40 cubic millimeters. To this is added 20 cubic millimeters of blood taken from the finger of a diabetic patient, then 1 c.c. of a watery solution of methylene blue, 1 in 6000, and finally, 40 cubic millimeters of liquor potassæ—B. P.—are added. Into a similar tube are placed 20 cubic millimeters of normal blood with the same proportion of methylene blue and liquor potassæ. The mixed fluids in the tubes will have a fairly deep blue or bluish-green color. Both these tubes are placed in a beaker or very wide test-tube containing water. The water is heated and kept boiling for four minutes; at the end of this time the fluid in the small test-tube containing the diabetic blood will have lost its bluish color and become a dirty yellow, while that in the tube containing the non-diabetic blood will remain bluish-green. He has examined blood in many cases of diabetes and always obtained a reaction, and has never obtained it in any other condition. His results have been confirmed by investigators in Germany, Italy, France, and America. Its reaction is due to some substance in solution in the blood-cells and is lost after the blood has been submitted to the action of yeast, the fermentative action of yeast fungus seeming to destroy the reaction substance. After the proteids of the diabetic blood or serum have been separated by boiling with crystalline soda sulphate and filtered, the filtrate gives the methylene blue reaction, but with the non-diabetic blood this fails. The action of the yeast is the same after the separation as before. It is well known that glucose has the power of reducing the warm alkaline solution of methylene blue and this methylene blue reaction carried out with the proportion of blood as before stated may be obtained with a solution of glucose. This reaction is obtained with diabetic urine, diabetic blood, diabetic blood-serum, and with filtrate from diabetic blood when the proteids have been separated. All these fluids after the action of the yeast fail to give the reaction. This indicates that the methylene blue reaction given by the diabetic blood is due to the action of the glucose which it contains. This reaction may be of value in diagnosis and it would be of special use after death in certain cases where diabetes has not been recognized. He thinks it advisable when the blood is examined post-mortem to always take it from the internal jugular vein. Blood from this vein is not liable to be contaminated by other fluids during necropsy. It is possible that it may be found that this diabetic reaction may be made the basis of an easy method of estimating the amount of sugar in the blood.

The Etiology of Scurvy. W. E. HOME.—The author discusses the cause of scurvy and notices certain facts which lead him to suggest that the initial lesion is the infection of the gums due to micro-organisms of decayed teeth. This infection is antagonized by lime-juice and fresh vegetables, which act as antiseptics, it being most apt to occur in time of hardship when cleanliness is less within our reach.

Limitations of Physical Methods in the Investigation of the Physiological and Psychical Phenomena of the Sight. F. W. EDRIDGE-GREEN.—The author refers to a former paper in which he showed why it is not possible to correctly ascertain color perception if we ignore color names. His views on the perception of color are stated as follows: Light acting on the retina liberates the visual purple from the rods and a photograph is formed, the cones and optic nerve-fibers conveying the impression to the brain. He thinks that it has been shown that this visual substance can be used up by exercise of the sight, and mentions experiments for the demonstration of this. He believes the shortening of the spectrum is due to some defect in this visual substance, the visual substance, being decomposed by light, sets up, by chemical, electrical or some other physical action, impulses which are conveyed to the brain by cones and optic nerve-fibers in the retina. The whole impression being brought to the center of memory, different portions, color forms, size, luminosity, etc., are conveyed to the mind through distinct perceptive centers. In the case of color the different perceptive centers are only able to distinguish six different points of difference in the spectrum, which really presents millions. We, therefore, have for normal sight the hexachromic theory, which agrees with the fact that both blue and violet have been demonstrated to be primary. It also, he believes, explains the degrees and variations of color-blindness. Assuming that the perception center is smaller, fewer points of difference are seen. The phenomena of contrasts is explained by the view that color being a point of difference this becomes more marked on comparison. In addition to other points raised, the following appear to him as objections to the so-called physical methods of ascertaining the color perception of individuals: 1. The varying absorption of light by the media of the eye, which affects the variation of the color curve without in any way affecting the real color perception of the individual. 2. Hyperesthesia as to certain colors that exists in certain individuals. 3. Variation in the subject's ideas of color. He believes we must be very careful in examining a person by physical methods to see that we do not obtain results that are physical, chemical and electrical phenomena. Psychical phenomena when they exist can not be measured by the balance and rule, but must be gained by direct evidence from the mind itself.

The Practitioner, August 4.

Recent Experimental Contributions to the Pathology of Diabetes. JOHN ROSE BRADFORD.—The fundamental fact in the pathology of diabetes is excess of sugar in the blood, and the method of producing this condition may be theoretically in three ways: 1. Too great an ingestion of sugar. 2. Excessive formation of sugar. 3. The presence of an excessive quantity may be caused by the tissues not oxidizing in the normal manner the amount normally ingested or produced. Probably most pathologists will agree in considering glycosuria and diabetes as possibly dependent on any one of these three conditions. Some, however, might hold the view that there is a fourth way, viz., owing to the peculiar disintegration of tissues, more especially the proteid tissues of the body, which are of such a character that they break down into nitrogenous and non-nitrogenous portions, the former excreting as a urea, the latter causing formation of sugar. According to this view, which is by no means generally held, diabetes might be unconnected with any anomaly in the ingestion, production, or destruction of sugar, but be really dependent on the primary disintegration of the tissues with sugar formation. The first view, that diabetes depends on the anomalies in the absorption of sugar is based on various observations of so-called alimentary glycosuria, but it is possible, however, that some of these may have a totally different origin and be really dependent on toxic actions. At the present time the bulk of cases, are considered to be of either hepatic or pancreatic origin. In the former case the production of sugar by the liver is greatly increased or the liver does not act as a sugar or carbohydrate stopping substance. The mechanism of pancreatic diabetes is not so clear, but the theory of Lépine that the organ produces a so-called ferment which is essential to the metabolism of sugar is probably the simplest explanation. There are some confirmatory facts supporting this view, but it can not be considered proved. The recent observations by Tuckett

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seemed to show that the thoracic lymph during digestion contains a substance which will cause glycosuria and it is possible that normally the activity of this substance is neutralized or annulled by the internal secretion of the pancreas, which would explain some experimental facts that have been reported.

Glycosuria and Diabetes in Relation to Life Assurance. HECTOR MACKENZIE.—The mortality from diabetes seems to be steadily increasing throughout the world, hence its importance in life assurance. A routine examination is now required of every applicant for life assurance. It is a matter of great importance that it should be detected when it exists, and it is very desirable that the examiner should state both the test he has employed and the results observed. This would in many cases enable the chief medical officer to form some idea as to the value of the observation. It must be remembered that there are some persons who are inclined to misrepresent themselves as being in perfect health when applying for insurance and will attempt to prevent the detection of glycosuria by special diet. The family history must be carefully looked into in this matter. Certain races, such as the Jews and Hindoos, seem to suffer more than others. Persons with red hair are supposed to be more susceptible to diabetes and tuberculosis and it is far more common in men than in women. Where both parents have died from the disease extra premium is certainly called for and such cases should be rejected, according to some authorities. If a small quantity of sugar is present the medical examiner should obtain a number of specimens without any restriction of diet. If no sugar is found in any of the other specimens and the life is not a young one and there is nothing else against it there is no cause for extra premium. Should there be a gouty history then the transitory glycosuria may be looked on as an additional reason for recommending the life for acceptance only as an endowment terminable at 63 or 65 as the case may be. If slight glycosuria is found on several occasions the applicant, if a young person, should be recommended to consult his own medical attendant and come up for examination on some future occasion. Cases of slight glycosuria in the middle-aged are not altogether ineligible, and, where it is associated with obesity and gout or both, may be considered as favorable on the whole. Cases of true diabetes, whether in old or young persons, should always be declined.

Clinical Tests for Sugar in the Urine. R. T. WILLIAMSON.—After describing the various tests for sugar in the urine Williamson concludes that the following rules are the best to follow in all contingencies: 1. Test with Fehling's solution, taking the precautions already mentioned—testing it for decomposition, keeping the amount of urine less than that of the solution, and not boiling too long. If the result be negative, no other test is required. 2. When Fehling's solution is reduced, but other indications of diabetes are absent, try the phenyl-hydrazin or fermentation test, or both. 3. When the reduction of Fehling's solution is slight, or when a decision is desirable within a few hours, try the phenyl-hydrazin test first. A negative result would be conclusive that the reduction of Fehling's solution was not due to grape sugar. 4. If the reaction with Fehling's solution is well marked, and if the decision can be conveniently delayed for a day, proceed at once to the fermentation test. A positive result is conclusive evidence of sugar. 5. Sometimes both confirmatory tests, and the testing of the urine with Fehling's solution after the action of yeast, are desirable, according to the indications already given.

Bulletin de l'Academie de Medecine (Paris), July 24.

Cure of Aneurysm by Ligature of Axillary Artery. GERARD-MARCHANT.—The aneurysm involved the entire right subclavian artery into the innominate trunk. It had developed in eighteen months to the size of a small hen's egg. A course of gelatin injections failed to benefit it, but the patient was completely cured after the axillary artery had been ligated under the clavicle and the common carotid tied close to the innominate trunk at the same sitting. This is the first time that ligature of the axillary has been successful, and the fact that the current in the artery was retarded, the pulse feeble, evidently contributed to the success. In less than six weeks the pulsating aneurysm had become transformed into a hard bunch.

Bulletin de la Soc. Med. des Hop. de Paris, July 19 and 26.

Pneumococcus Peritonitis. P. MENETRIER.—In fourteen cases of primary pneumococcus peritonitis collected by Brun, eleven were girls, but Menetrier has had occasion to observe four adult cases, including three males. All were fatal and offered no chance for surgical intervention. Two cases are described in detail. In one a peritonitis, commencing abruptly and without known cause, produced death in nine days. The diffuse purulent peritonitis found at the autopsy was without a trace of perforation, inflammatory focus or portal of entry for the infection. Cultures disclosed the pneumococcus and cadaveric flora. In the other, the peritonitis commenced suddenly in the course of a mild bronchial attack, possibly la grippe, and was distinguished by the three characteristic signs of pneumococcus infection, pain in the abdomen, vomiting and diarrhea. The abdominal phenomena then subsided and the temperature fell to 37 C., but the right foot developed a painful ischemia, with a gangrenous patch on one toe and ischemia of the hand, with visible and palpable thrombosis of the left radial artery, persistent albuminuria and diazo-reaction. The peritonitic symptoms reappeared the twenty-fifth day, accompanied by persistent and painful hiccough. The patient died in coma on the twenty-ninth day. The autopsy disclosed multiple arterial thrombosis and generalized peritonitis, with pneumococci developing in all cultures. There was no endocarditis nor intracardiac clot, nor source of emboli in the vessels or respiratory apparatus. The thrombosis must have been primary. The pneumococci were not found in the walls, but merely in the clot itself. Perimicrobian leucocytic agglomerations had probably formed in the blood from aborted phagocytosis, and as they increased in size had obstructed the circulation. Such phenomena are usually described as infectious arteritis, but the mechanism is probably that of a perimicrobian leucocytic thrombosis.

Action of Organs on Poisons. L. THOINOT.—The tissue of organs from freshly killed animals was mixed with poisons, passed through a filter and injected into other animals of the same species. The control animals were injected with the same poisons without mixture with the organs. The results showed that kidney and liver tissue neutralizes all poisons in variable degrees, while the tissue of other organs neutralizes some poisons and exaggerates the poisonous effect of others. Brain tissues, for instance, neutralizes morphin and strychnin; does not affect atropin but enhances to a marked extent the action of arsenic.

Echo Medical (Lille), July 29.

Hospital Abuses at Paris. THIERY.—Among the instances of hospital abuses cited by Thiéry in his address on this subject at the Congress of Professional Medicine, were the cases of a jockey receiving $5000 a year who applied at the Pitié for treatment of a sprain, and of a cashier on a $4000 salary who appeared with the other out-patients at the Hôtel Dieu and was surprised that he was not passed in first. The wife of a Bulgarian official who was sent to Paris for special treatment is another instance. She spent her money in the shops and had her laparotomy performed gratuitously at the Saint Louis. She did not even pay the small amount charged for a private room. This hospital had a similar experience with a woman who came from America for special treatment. A wealthy Russian prima donna requested to be operated on free of charge at her apartment, as "otherwise she would be compelled to go to a public hospital." One of the physicians of the charity out-patient department states that he has been summoned 337 times to attend persons who were not sick at all. He discovered that the cod-liver oil he had been prescribing for a child in another family was being systematically used to fill the lamps. Each year 18,000 out of the 50,000 births at Paris are at the public expense. Thiéry also called attention to the fact that each bed in the hospitals cost 20 francs a day, and that when less than this sum is accepted from well-to-do persons, the poor are deprived of the benefit of the balance.

Journal de Medecine de Paris, July 29.

Artificial Delivery with Glycerined Gauze. MAGNIAUX.—The writer describes three cases in which delivery was prematurely induced in women with narrow pelves, by means of

a wick of glycerined gauze inserted into the cervix. He recommends the process as simple and within the reach of all, it obviates the danger of premature rupture of the bag of waters and of hemorrhage, and is more rapid in its effects than the Knause process, although not quite so sure. Even when it fails to induce delivery, it dilates the cervix, which facilitates the introduction of the sound or hystereurynter.

Presse Medicale (Paris), July 30 and August 1.

Cholera Infantum. A. B. MARFAN.—Various experiments and tests are reported to prove that cholera infantum is due to an ectogenic intoxication caused by certain toxins which develop in milk during the first few hours after leaving the cow and are not affected by boiling the milk later. The toxins form much more rapidly in hot than in cold weather, and are the chief factors in the production of cholera infantum. The invasion of the intestinal mucosa by microbes is a secondary phenomenon. This conception emphasizes the necessity of sterilizing by the Soxhlet method or merely boiling the milk, when it can be done within two or three hours after milking. If several hours have elapsed, however, these methods of sterilization are absolutely useless, as they have no effect on the toxins already formed in the milk. If the milk has to be brought a long distance, it must be sterilized at the dairy within two or three hours. Marfan's treatment of cholera infantum is based on the suspension of all food and the administration of pure water, substituting the milk by approximately the same amount of water, and is attended by truly remarkable effects. Subcutaneous injections of artificial serum are also made, if indicated, and warm baths, with or without mustard, are given. If collapse seems imminent, he adds a little caffein to the artificial serum injected. The treatment after cessation of the choleriform symptoms is that of any simple gastroenteritis, returning again to the water diet if diarrhea reappears.

August 1.

Bacteriology of the Mouth of the New-Born. E. BONNAIRE.—A case of double parotitis in an otherwise healthy new-born infant of a healthy mother, suggested bacteriologic investigation of the mouths of the new-born. Research on eighteen infants demonstrated that in every instance when the head of the fetus is lodged in the cervicovaginal canal for any length of time, after the rupture of the bag of waters, micro-organisms are found in the mouth, even in the absence of any digital exploration or intervention. The infection does not come from the outer air nor from the mother's nipple, but occurs during the passage of the head through the vagina unless the expulsion of the fetus is rapid and immediately follows the rupture of the amniotic sac. The membranes sometimes protrude and form a protecting sheath, isolating the entire inner surface of the vagina. In a subsequent case the vagina was rendered absolutely sterile as labor commenced, and during expulsion the genital zone was frequently irrigated with a solution of sublimate. As soon as the mouth appeared it was wiped with a sterile compress and a pad was kept over the mouth until the infant was placed in the incubator. No cultures could be obtained from the mouth six hours later.

Deutsche Medicinische Wochenschrift (Leipsic), July 26.

Tumors in Cerebellum. SCHEDE.—A case is described in which the symptoms indicated a lesion in the cerebellum. The hearing was entirely lost in the left ear, and reduced to nearly zero in the right; vision, in left 20/300, and right 20/70. White and blue were the only colors distinguished; red was seen as black, green and yellow as white. There was also incipient optic atrophy and retrogressing congestion of the papilla. When the patient stood still he swayed, and when asked to turn around, fell immediately, swaying and falling always toward the left. The arm on this side was also weaker than the right. In operating, when the dura was exposed on both sides, the right seemed cyanotic, the left normal, but nothing was found on the right side, which was investigated first. The tumor was found 1 cm. below the surface in the left side, a glioma 2x4 cm. in size and weighing 18 gm. After its removal the X incisions in the dura on each side were easily sutured, leaving a gauze drain on the left. The results were brilliantly successful. By the next day the hearing was practically restored to normal and the sight was much improved. The patient can now count fingers readily. The swaying also ceased. In a second case the symptoms were still more pronounced. The patient swayed and fell constantly to the left. A smooth-walled cyst was found and removed on the left side, but it proved to be only a portion of a cystic glioma, which entailed death within a month. No blood was lost during either operation, which Schede ascribes to the erect sitting posture of the patients, with merely the head bent over. The first operation increases to 3 the number of patients cured by removal of a tumor in the cerebellum out of 14 operated on. Five died immediately; three survived without improvement, and one died from recurrence. Schede made a semicircular incision from one mastoid process to the other and dissected down the soft parts in a flap reaching to the bone and downward to the foramen occipitale magnum. Removing the crista occipitalis allows ample space for removal of a tumor. The bone defect at this point is of little moment, as the strong muscles of the neck cover it sufficiently.

Parasitic Nature of Eczema. W. SCHOLTZ.—The writer confirms his previous announcements that eczema is due to the action of the staphyloccus pyogenes aureus on a specially prepared soil, the nature of the preceding alteration of the epithelium and corium determining the eczematous character of the dermatitis, in connection with individual peculiarities and especially the susceptibility of the skin. This conception explains the empiric success of present methods of treatment.

Early Diagnosis of Carcinoma. E. HOLLANDER.—In examining the patient for evidences of carcinoma hereditary antecedents are of the greatest value, especially in case of carcinoma of the alimentary canal. There are families in which the lungs, in others the stomach, etc., are the *locus minoris resistentiæ*, but in scarcely any other affection is this family tendency so marked as in carcinoma of the intestines. Hollander refers to one family in which there were 16 certain cases and 3 dubious in five generations. He also calls attention to the fact that in studying the family history it must be borne in mind that if members of the family die under 40 this by no means excludes the possibility that they might have had carcinoma later, in which respect it is in marked contrast to tuberculosis. Another diagnostic point is certain alterations of the skin, which seemed to accompany intestinal carcinoma with striking frequency. They are three-fold; vascular, verrucous, or pigmentary, and usually occur more or less pronounced, and possibly associated. The vascular alterations are numerous bright-red spots in the midst of sound skin the size of a pinhead to that of a bean, slightly raised above the level of the surrounding skin. Pressure does not expel the blood unless forcible. They occur even on the obese and in fatty regions of the body. The second cutaneous anomaly is the seborrhagic warts, such as are known as senile warts, but which occur in young persons with the carcinoma tendency. In some cases they develop into tumors which only differ from other carcinomata of the skin by their relative benignity. The third group is the pigmented patches, resembling freckles, which are scattered more or less numerously over the covered portions of the body. In a case illustrated, the entire thigh is spotted like a bird's egg. The sister of this patient had exhibited the same cutaneous phenomenon as a premonitory symptom of intestinal carcinoma, and the second patient diagnosed her own carcinoma long before the physicians could discover it.

Sale of a Medical Practice. BIBERFELD.—A suit has recently been decided in Germany relieving the incoming doctor of the obligation to pay a certain amount for the medical practice of his predecessor. The sale of a medical practice was qualified by the judge as immoral—*gegen die guten Sitten*. Biberfeld protests against this view and presents arguments to prove its fallacy, unless the practice is sold knowingly to a charlatan or man of irresponsible character.

Muenchener Medicinische Wochenschrift, July 24.

Autointoxication and the Thyroid. F. BLUM.—The title of this article in the original is "New experimentally discovered ways of determining and treating diseases induced by auto-

intoxication." After much experimental research Blum asserts that the function of the thyroid is to deprive of their toxicity the toxins generated in the intestinal canal from the putrefaction of albumin. If the thyroid gland is not working properly these enterotoxins are not rendered innocuous and consequently pass on unchanged and cause serious disturbances, with corresponding anatomic changes. If the action of the unneutralized enterotoxins is sudden and stormy, the central nervous system is alone affected, but if prolonged, the kidneys exhibit evidences of degeneration in the parenchyma, and interstitial proliferation and infiltration in the vicinity of the glomeruli. The enterotoxins in their passage through a healthy thyroid gland are deposited there as a highly molecular combination—thyreotoxalbumin—and are gradually deprived of their toxicity. The combination hitherto supposed to be the specific iodin-substance of the thyroid gland is in reality merely an intermediate product of this transformation process. It is, in short, a thyreotoxalbumin more or less saturated with iodin. This thyreotoxalbumin never passes into the circulation if the thyroid gland is sound, and there is also a pre-existing and acquired immunity against it. There is likewise formed in animals restored to health after thyroidectomy a substance that protects against the enterotoxins. Immunity against enterotoxins does not confer immunity against the thyreotoxalbumin nor vice versa. If the results of this research apply also to man, they suggest that many more diseases than have hitherto been supposed, are closely connected with intestinal processes and insufficiency of the thyroid gland. They would modify our previous conceptions of myxedema and of Basedow's disease, and indicate therapeutic measures.

Present Status of the Sanatorium. E. RUMPF.—The writer is in charge of a large sanatorium in Baden and he deplores the loss of time and expense from the carelessness that sends absolutely incurable consumptives to such institutions. Polyclinics for tuberculous patients will be a great assistance in this line, especially if they are conducted by men with practical experience as medical attendants in a sanatorium, but most desirable of all would be a special tuberculosis hospital in the larger cities, to relieve the general hospitals, in which the patients could be sifted out and the internes trained.

Expiration Grooves in the Liver. K. WALZ.—The sagittal grooves on the upper surface of the liver have been explained in various ways, but the writer demonstrates that they are caused by the bending of the organ as the diaphragm presses down the upper surface and then releases it. The middle is pressed down and the sides up, and then the sides relax in expiration and the middle rises. The process is probably an important factor in the evacuation of the gall-bladder.

Improved Technique of Hand Disinfection. B. KRÖNIG.—Zweifel has been using for several months a solution of mercury which he considers much superior to sublimate, as with identical disinfecting powers it has no irritating action on the skin, does not precipitate albumin nor blood, while it has a much more intense deep action, at least on dead tissues. The salt used is the citrate of mercury, 10 gm. with ethyl diamin 4 gm., and water 86 gm. It is used in a 3 per 1000 solution and in place of the 1 per 1000 sublimate, after eight to ten minutes' scrubbing.

Therapie der Gegenwart (Berlin), July.

Treatment of Impotency. E. MENDEL.—Besides the usual measures and remedies in vogue, Mendel has been using during the last two years yohimbin, a medicine borrowed from the natives of Cameroon, where it is used to cure impotency in the male. Tests on dogs showed that it possessed an unmistakable effect on the genital sphere, which larger doses intensified into general convulsions. It had also a paralyzing tendency later, and depressed the pulse. He has treated forty cases of impotentia coeundi with sol. yohimbini, 5 to 10 drops, three times a day. A distinctly favorable effect was evident in 50 per cent. of the patients who could be controlled, and no injurious effects of any kind followed its administration. Mendel adds that even assuming that suggestion may have had something to do with the results, they still warrant further trials of the remedy. When he suspects hypochondriac functional impotency in a member of the "upper ten" he finds that a bottle of champagne is usually sufficient to suppress the inhibiting influences.

Gazzetta degli Ospedale (Milan), July 12 and 29.

Vitality of Skin Flaps. P. PEZZOLINI.—The extreme limit of latent vitality in the experiments with periosteum flaps, reported by Grohé and Morpurgo last year, never surpassed 100 and 192 hours, respectively. Pezzolini's grafts of skin taken from the backs of dogs and kept in normal salt solution at room temperature, were successful even after an interval of six days. In other similar experiments some of the cells showed mitosis after a ten-day interval, and even after eleven days when kept at zero temperature. Experiments with similar flaps sealed dry in a glass jar kept in the refrigerator, demonstrated that they rapidly lost their vitality within two days, when dry. The flaps in the successful grafts grew into place by the same mechanism as fresh flaps, only more slowly and with greater loss of tissue.

Sclavo's Serum for Pustula Maligna. A. LISCIA.—In many years' experience with pustula maligna, all the mild cases recovered, no matter what treatment was used, and all the malignant ones died. In two recent cases of unmistakable malignant character both were saved with the prompt administration of Sclavo's serum.

Hysteric Cutaneous Lesions. E. LEONARDI.—A placid, well-developed young Italian woman was affected at periods corresponding to the menses with a suddenly appearing elliptic solution of continuity on the lower eyelids and on the nasolabial sulcus, which healed without a scar in a few days. There was not a trace of hysteria about the girl or her antecedents, except the facility with which she could be hypnotized and the presence of two anesthetic zones on the forearm and right cheek. Leonardi, however, is inclined to attribute the lesions to a hysteric autosuggestion from a patch of preceding eczema on the girl's hand and forearm.

New Conceptions of Helminthiasis. P. DEMATTEIS.—For a number of years Dematteis has been studying and experimenting with intestinal worms. He noted that in a number of cases of typhoid fever the patients evacuated ascarides by mouth and anus, and he has succeeded in demonstrating that a febrile elevation of temperature arouses the helminths and especially the nematoda to increased energy of movement. Owing to this increased energy, they may produce trauma of the intestinal walls and consequent lesions, particularly if the fever is associated with conditions of the walls rendering them more susceptible to injury. His recent observations and tests have also established that helminths secrete toxic substances which may determine various morbid processes when absorbed. He found in the intestines of ascarides taken from six children the bacillus coli, subtilis, proteus, and various staphylococci and streptococci. In one case there was a pure colony of the latter. There is, therefore, great danger from evacuation of pathogenic germs and elaborated toxins in helminths migrating under the influence of febrile temperatures, especially if there are anatomopathologic alterations in the intestinal walls. This subject is one that deserves the consideration of all physicians and appropriate measures to exterminate the helminths in all such cases where their presence is suspected.

July 29.

Diastatic Ferment in White Corpuscles. C. TARCHETTI.—Dogs were injected subcutaneously with a solution of rice starch and the corpuscles examined later in respect to their reaction to iodin. Some of the whites presented a typical reaction in the granules of starch, while in others there was unmistakable evidence that the starch had undergone partial digestion in them. In another experiment insoluble starch left for seven days in contact with sterile pus at a temperature of 37 C. became soluble. Sterile pus dried and pulverized, and mixed with alcohol and glycerin, was also found to have a marked diastatic action on starch.

Treatment of Syphilids During Pregnancy. N. FEDERICI.—As a contribution to the disputed problem of the advisability of energetic mercurial treatment during pregnancy, Federici relates an observation of a young woman in the

eighth month of pregnancy who applied for relief from a specific iritis. She presented a characteristic roseola and diffuse adenopathy. Certain physicians consulted hesitated to institute the treatment indicated, but Federici ventured on a vigorous course of mercurial injections, accompanied by potassium iodid, with the satisfactory result of curing the syphilids without interfering with the normal delivery at term of a "fine boy."

Brazil Medico (Rio Janeiro), July 1.

Excision of Buboes in Plague. CAMILLO TERNI.—It is an unpardonable error to wait for the suppuration of the bubo before excising it, according to Terni. The infection rapidly spreads and its toxic effects soon become manifest, while serum treatment is powerless at this stage. Excision of the primary bubo will frequently arrest the infection and should never be neglected. It is a simple operation. The bubo is easily isolated and excised with the contiguous lymphatic ganglia, especially if they are hemorrhagic. It is seldom necessary to apply a ligature, and the loss of blood is slight. The region is then irrigated with a strong solution of sublimate and a moist drain inserted. He advocates local anesthesia with ethyl chlorid, and recommends excision of the bubo even in doubtful cases, as it can never do harm. If excision is absolutely impossible, he recommends injecting a 2 per cent. solution of sublimate or of phenic acid into the bubo. In his experiences at the Jurujuba Hospital in April and June, 37 died out of the 145 plague patients received, a proportion of 26.2 per cent. Excluding those who died in less than forty-eight hours after entering, the proportion is only 13 per cent. The thirty-six cases in the town during the same thirty days, who were treated by other methods at home or received no treatment, proved fatal.

Ichtheroid Psychoses. M. NÉRY.—Certain writers have tried to distinguish a special variety of mental disturbances which occur consecutive to yellow fever, but Néry asserts that they do not differ in any respect from the various psychoses observed during convalescence from any infectious disease.

St. Petersburger Medicinische Wochenschrift, July 14, 21 and 28.

Success of Mercury in Gonorrhea. A. PALDROCK.—A patient had been long treated in vain for chronic articular rheumatism, which had first commenced about a year after a tedious but finally cured gonorrhea. Inspired by Böttcher's success with a case of general gonorrheal infection cured with gray ointment, Paldrock commenced a course of inunctions, and after 144 gm. had been rubbed into the patient in the course of five weeks, he was dismissed, completely cured, and has had no recurrence during the year since. In another case of chronic gonorrhea the cocci were found in the effusion of an intercurrent pleurisy. The writer concludes by suggesting that multiple articular affections with chronic, acute or past gonorrhea should be treated with gray ointment even in the absence of syphilitic antecedents. Gonorrheal articular affection is characterized by the rapid involvement of the ligaments and the small amount of exudate. Contraction, atrophy and ankylosis appear early. Such cases are by no means rare, but they usually masquerade as "chronic articular rheumatism."

Puerperal Eclampsia. G. FERBERG.—The writer of this communication distinguishes between hysteric, epileptic and eclamptic puerperal convulsions. In a recent case the seizures that occurred during the puerperium suggested epilepsy, although there had been no previous history of anything of the kind. A sister had been affected in the same way; both women died in a few days after delivery. The cases suggest the existence of latent epilepsy in each, aroused to activity by the stress of parturition.

July 21 and 28.

Syphilis Hemorrhagica Neonatorum. W. LOEWENBERG.—Three observations of hemorrhagic diathesis in the new-born with severe inherited syphilis are described. Bacteriologic tests in each case revealed the presence of streptococci or staphylococci in the blood and conclusively demonstrated a septic infection. The writer also reviews the cases on record and concludes that there are no grounds for assuming the existence of a specific hemorrhagic syphilis in the new-born.

Books and Pamphlets

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

A DICTIONARY OF MEDICINE AND THE ALLIED SCIENCES. Comprising the Pronunciation, Derivation, and Full Explanation of Medical, Pharmaceutical, Dental and Veterinary Terms, Together with Much Collateral Descriptive Matter, Numerous Tables, Etc. By Alexander Duane, M.D., Assistant Surgeon to the New York Ophthalmic and Aural Institute. Third Edition. Enlarged and Thoroughly Revised. With Eight Full Page Colored Plates. Cloth. Pp. 645. Price, $3.00. Philadelphia and New York: Lea Bros. & Co.

ATLAS AND EPITOME OF SPECIAL PATHOLOGIC HISTOLOGY. By Docent Dr. Hermann Duerck, Assistant in the Pathologic Institute; Prosector to the Municipal Hospital, L.I., in Munich. Authorized Translation from the German. Edited by Ludvig Hektoen, M.D., Professor of Pathology in Rush Medical College, Chicago. Circulatory Organs; Respiratory Organs; Gastrointestinal Tract. With 62 Colored Plates. Cloth. Pp. 158. Price, $3.00. Philadelphia: W. B. Saunders. 1900.

A MANUAL OF SURGICAL TREATMENT. By W. Watson Cheyne, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London, and F. F. Burghard, M.D, and M.S., F.R.C.S. Teacher of Practical Surgery in King's College, London. In Seven Volumes. Volume iii. The Treatment of the Surgical Affections of the Bones. Amputations. Cloth. Pp. 395. Price, $3.50. Philadelphia and New York: Lea Bros. & Co. 1900.

A MANUAL OF CLINICAL DIAGNOSIS BY MICROSCOPIC AND CHEMICAL METHODS. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D., Late Assistant Resident Physician, Johns Hopkins Hospital, Baltimore. Third edition, thoroughly revised. Illustrated with 136 Engravings and 18 Plates in Colors. Cloth. Pp. 558. Price, $3.50. Philadelphia and New York: Lea Bros. & Co. 1900.

CLINICAL STUDIES IN EPILEPSY. From the Craig Colony for Epileptics at Sonyea, N. Y. 1. Exhaustion-Paralysis in Epilepsy. 2. Paramyoclonus Multiplex Associated with Epilepsy. 3. Hypertrophic Infantile Cerebral Palsy and Phocomelus Associated with Epilepsy. L. Pierce Clark, M.D. Paper. Pp. 230. Utica, N. Y.: State Hospital Press. 1900.

BENEATH HAWAIIAN PALMS AND STARS. By E. S. Goodhue, Government Physician. Illustrated from Photographs and Pen Sketches by Robert J. Burdette, Jr., and C. B. Andrews. Cloth. Pp. 248. Price, $1.50. Cincinnati, Ohio: The Editor Publishing Co.

SECOND REPORT OF AN INVESTIGATION OF THE RIVERS OF OHIO AS SOURCES OF PUBLIC WATER SUPPLIES. By the Ohio State Board of Health. 1899. Cloth. Pp. 284. Columbus, Ohio: The Westbote Co. 1900.

THIRTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF OHIO FOR THE YEAR ENDING OCTOBER 31, 1898. Paper. Pp. 689. Columbus, Ohio: The Westbote Co. 1899.

RINGWORM IN THE LIGHT OF RECENT RESEARCH. Pathology, Treatment, Prophylaxis. By Malcom Morris, Surgeon to Skin Department, St. Mary's Hospital. With Twenty-two Microphotographs and One Colored Plate. Cloth. Pp. 137. Price, $2.00. London, Paris and Melbourne: Cassell & Co., Ltd. 1898.

FORTY YEARS IN THE MEDICAL PROFESSION, 1858-1898. By John Janvier Black, M.D., Member of the College of Physicians of Philadelphia. Cloth. Pp. 498. Price, $3.00. Philadelphia: J. B. Lippincott Co. 1900.

ON GALL-STONES AND THEIR TREATMENT. By A. W. Mayo Robson, F.R.C.S., Professor of Surgery in the Yorkshire College of the Victoria University. Illustrated with 20 engravings. Cloth. Pp. 285. Price, $2.00. London, Paris and Melbourne: Cassell & Co., Ltd. 1892.

A TREATISE ON APPENDICITIS. By John B. Deaver, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. Second Edition. Thoroughly Revised and Considerably Enlarged. Illustrated with Twenty-two Full Page Plates. Cloth. Pp. 300. Price, $3.50. Philadelphia: P. Blakiston's Son & Co. 1900.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. xii. For the year 1899. Cloth. Pp. 365. Philadelphia: Wm. J. Dornan. 1900.

TWENTY-THIRD ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY AND REPORT OF THE BUREAU OF VITAL STATISTICS. 1899. Cloth. Pp. 432. Trenton, N. J.: MacCrellish & Quigley. 1900.

A MEMOIR OF HENRY JACOB BIGELOW, A.M., M.D., LL.D., Member of Massachusetts Medical Society, Etc. Cloth. Pp. 297. Price, $4.00. Boston: Little, Brown & Co. 1900.

I. THE MECHANISM OF DISLOCATION AND FRACTURE OF THE HIP. II. LITHOLAPAXY; OR, RAPID LITHOTRITY WITH EVACUATION. By Henry Jacob Bigelow, A.M., M.D., LL.D. Cloth. Pp. 356. Price, $4.00. Boston: Little, Brown & Co. 1900.

SURGICAL ANESTHESIA ADDRESSES AND OTHER PAPERS. By Henry Jacob Bigelow, A.M., M.D., LL.D. Cloth. Pp. 375. Price, $4.00. Boston: Little, Brown & Co. 1900.

ORTHOPEDIC SURGERY AND OTHER MEDICAL PAPERS. By Henry Jacob Bigelow, A.M., M.D., LL.D. Cloth, Pp. 373. Price, $4.00. Boston: Little, Brown & Co. 1900.

PAMPHLETS

ANNUAL REPORT OF THE BOARD OF HEALTH OF THE CITY OF

WINONA, MINNESOTA. For the Year Ending March 31, 1900. Paper. Pp. 12. Winona, Minn.: Joseph Leight Press. 1900.

ANNUAL REPORT SHELTERING ARMS HOSPITAL, PAINT CREEK, W. VA. For 1899-1900. Paper. Pp. 10.

CONICAL STUMP AFTER AMPUTATION IN CHILDHOOD.—METHODS AND RESULTS IN 450 CASES OF FRACTURE OF THE FOREARM BONES.—METHODS AND RESULTS IN 175 CASES OF SIMPLE FRACTURE OF FEMUR.—WOUND OF THE URINARY TRACT DURING AN OPERATION FOR ACUTE APPENDICITIS.—SPONTANEOUS CLOSURE OF URINARY FISTULA.—RECOVERY. By Charles M. Powers, M.D., Denver, Colo. Reprints.

CONSTITUTION AND BY-LAWS OF ROCHESTER ACADEMY OF MEDICINE. 1900. Paper. Pp. 37. Rochester, N. Y.: Genesee Press.

EIGHTEENTH ANNUAL MEETING OF THE NEW MEXICO SOCIETY. Held at Albuquerque, N. M., May 30, 1899. Paper. Pp. 12.

FIBERS FROM THE LAMINA CRIBROSA EXTENDING OUT FROM THE OPTIC DISC OVER THE RETINA. By Frank C. Todd, M.D., Minneapolis, Minn. Reprinted from Ophthalmic Record.

IMPETIGO ADENOSA. By N. E. Aronstam, M.D., Ph.G. Reprinted from Medical Age.

IS A MEDICAL EDUCATION A NECESSARY QUALIFICATION FOR DENTAL PRACTICE? By Alice M. Steeves, D.D.S., Chicago. Reprinted from Jour. A. M. A.

LOSDORFER'S BODIES: A New Discovery in Syphilitic Blood. By Victor Neudörfer, Vienna, Austria. Reprinted from St. Paul Med. Jour.

MALPRACTICE SUITS: How Best to Protect Ourselves Against Them. By Donald B. Pritchard, M.D., Winona, Minn. Reprinted from St. Paul Med. Jour.

NINTH ANNUAL REPORT OF THE OHIO HOSPITAL FOR EPILEPTICS AT GALLIPOLIS, OHIO, TO THE GOVERNOR OF THE STATE OF OHIO FOR THE FISCAL YEAR 1899. Paper. Pp. 64. Columbus, Ohio: Westbote Co.

NINTH ANNUAL REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS OF NEW JERSEY. 1899. Paper. Pp. 47. Trenton, N. J.: MacCrellish & Quigley.

THE OHIO MEDICAL UNIVERSITY IMBROGLIO. Personal Malice, Jealousy, and Ambition vs. The Demands for Higher Standards. Paper. Pp. 43. Cincinnati, Ohio: Curts & Jennings.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA June, 1900. Paper. Pp. 216. Published by the Society.

REPORT OF AN TING HOSPITAL, PEKING, CHINA, FOR TERM ENDING APRIL 30, 1900. Paper. Pp. 9. Shanghai, China: American Presbyterian Mission Press.

SEVENTH ANNUAL REPORT OF THE MECHANICSBURG, PA., BOARD OF HEALTH FOR 1899. Paper. Pp. 12. Mechanicsburg, Pa.: Thomas Printing House.

SYMPATHETIC INFLAMMATION AND SYMPATHETIC IRRITATION. By John A Kyle, M.D., Indianapolis, Ind. Reprinted from Am. Jour. of Ophthalmology.

TRANSACTIONS OF THE RHODE ISLAND MEDICAL SOCIETY. Volume vi. 1899. Paper. Pp. 15. Providence, R. I. Snow & Farnham. 1900.

TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY. Twenty-Second Annual Meeting held at Columbus, Ohio, August 17, 18 and 19, 1899. Volume xxi. Paper. Pp. 275. Lincoln, Neb.: Hunter-Woodruff Printing Co. 1900.

TRADE PAMPHLETS

THE LAND OF THE SKY. Western North Carolina Asheville Plateau. By Southern Railway.

MAP OF THE UNITED STATES. By Lord and Thomas.

RECEIPTS FOR INFANT FOOD. By Maltine Company.

Change of Address.

Dr. J. P. Atkinson, from 236 Richardson St. to 231 Marietta St., Atlanta, Ga.

Dr. K. Bauduy, from 3862 Olive St. to 2808 Olive St., St. Louis, Mo.

Dr. L. A. Bolling, from Fort Wayne to Lithia Springs Hotel, Attica, Ind.

Dr. S. L. Bernstein, from 846 Woodland Ave., to 1351 Wilson Ave., Cleveland, Ohio.

Dr. W. C. Cundiff, from Somerset, Ky., to Huntsville, Tenn.

Dr. F. E Cameron, from Hessell to Detour, Mich.

Dr. E. A. Crockett, from 65 Pierce St. to 114 Lisbon St., Lewiston, Maine.

Dr. H. D. Covert, from 221 Everett St. to 2539 Cherry St., Toledo, Ohio.

Dr. G. J. Dennis, from Lakota Hotel to Kenwood Hotel, Chicago.

Dr. E. E. Furney, from 2905 Chestnut St. to 3887 Delmar Boul., St. Louis, Mo.

Dr. G. R. Feil, from 846 Woodland Ave. to 1351 Willson Ave., Cleveland, Ohio.

Dr. E. M. Green, from Versailles to Danville, Ky.

Dr. H. Hickman, from 3624 S. Broadway to 3353 S. Jefferson St., St. Louis, Mo.

Dr. G. F. Harnter, from 900 Sutter St. to 915 Leavenworth St., San Francisco, Cal.

Dr. H. P. Howard, from Burke's Garden to Alexandria, Va.

Dr. F. W. Hornbaker, from Manassas to Chantilly, Va.

Dr. E. R. Hering, from Cross Plains to Shell Lake, Wis.

Dr. J. W. Lord, from 825 N. Arlington St. to 24 W. Franklin St., Baltimore, Md.

Dr. T. B. Morrissey, from Portland, Me., to 306 Washington St., Providence, R. I.

Dr. F. LeMoyne, from Point Pleasant, N. J., to Box 63, Port Hope, Ont.

Dr. R. R. Price, from New Cumberland, W. Va., to Toronto, Ohio.

Dr. W. H. Prioleau, from Buffalo Lithia Springs, W. Va., to Highlands, N. C.

Dr. W. B. Ray, from Etna to Box 148, Glenshaw, Pa.

Dr. L. S. Ramsdel, from 489 E. 42d St., Chicago, to Manistee, Mich.

Dr. Louise M. Richter, from Los Angeles to Garvanza, Los Angeles County, Cal.

Dr. J. E. Stanton, from St. Anthony Hospital to 829 Flournoy St., Chicago.

Dr. G. O. Switzer, from Greenland, Mich., to Stanley, Wis.

Dr. J. H. Spencer, from Fayetteville, Ark., to Berlin Building, Tacoma, Wash.

Dr. C. E. Sayre, from 103 State St. to 122 LaSalle St., Chicago.

Dr. F. D. Smythe, from 269 Vance St., to Porter Bldg., Memphis, Tenn.

Dr. W. L. Taylor, from Townesville to Storall, N. C.

Dr. J. Titcomb, from 327 Providence St. to New Jersey Bldg., Duluth, Minn.

Dr. J. R. Taylor, from Kenosha, Wis., to 246 3rd Ave., Detroit, Mich.

Dr. Edward Wallace Lee, from Omaha, Neb., to Lineman Bldg., Vandeventer and Washington Boul., St. Louis, Mo.

Dr. J. F. Wilson, from 6124 Sangamon St. to 535 W. 61st St., Chicago.

Dr. R. H. Whittington, from New Matamoras to West, Ohio.

Dr. J. M. Wallace, from Tallassee, Ala., to Webster, Fla.

Dr. W. G. Wren, from 713 Mt. Vernon Ave. to 225 North Ohio Ave., Columbus, Ohio.

Dr. A. N. Yates, from Boulder to Lyons, Col.

Queries and Minor Notes.

MEDICAL LAWS.

BURKESVILLE, KY., Aug. 14, 1900.

To the Editor:—Will you please do me the favor of publishing in your next issue of THE JOURNAL, the laws in regard to the practice of medicine in the State of Washington, and State of Tennessee, as they exist at present. Fraternally, A SUBSCRIBER.

ANS.—For the Washington law see THE JOURNAL, August 11. In Tennessee, unless the applicant is a graduate of a medical college within the state, an examination is required. For forms of application, etc., address T. J. Happel, M.D., Secy., Trenton, Tenn.

To the Editor:—Please inform me through THE JOURNAL as to the laws regulating the practice of medicine in the States of New York and Connecticut, and give addresses of the secretaries of each state board of examination. N.

ANS.—In New York a candidate must be 21 years of age, of good moral character (certificate from two physicians in good standing), and have a satisfactory preliminary education, have attended four courses of at least six months each in a recognized medical school and pass an examination satisfactorily. The Secretary of the Board of Examiners is Dr. M. J. Lewi, Bowling Green Bldg., 5 Broadway, New York.

In Connecticut an examination is required. The Secretary of the State Board of Health is Dr. C. A. Lindsley, New Haven.

To the Editor:—Will you kindly give me what information you can regarding laws governing practice of medicine in Porto Rico Island and oblige? Yours truly, C. V. G.

ANS.—We are not fully informed as to the requirements for practice in Porto Rico. The correspondent is referred to Dr. J. VanR. Hoff, U. S. A., San Juan, for particulars.

"INHALATION OF GASEOUS ANTISEPTICS."

NASHVILLE, TENN., August 12, 1900.

To the Editor:—Can you tell me if Lacroix's article, "Inhalation of Gaseous Antiseptics," in *Bulletin de l'Académie de Médecine* (Paris), June 26, has been translated into English? If so, where can I get it? If not, where can I get the *Bulletin* in this country containing the article? There is an abstract of the article on page 325 of THE JOURNAL of the A. M. A. for Aug. 4, 1900. Very truly yours, L. B. G.

ANS.—We are not aware of any English translation of the article mentioned. The *Bulletin de l'Académie de Médecine* can probably be obtained directly from the publishers, Mason et Cie., 120 Boulevard Saint Germain, Paris, France, or through importing booksellers. If the French copy is desired it can be loaned from THE JOURNAL office on receipt of postage and promise to return.

"HYGIENE"?

BEDFORD, IND., Aug. 7, 1900.

To the Editor:—Can you send me the address of *Hygiene*, a journal devoted to that branch exclusively?

Yours respectfully, V. O.

ANS.—The only publication of the name known to us is published in London, England. It does not appear, however, in the list of English medical publications in Churchill's Medical Directory for 1900.

ILLITERATE DOCTORS.

The Indiana State Board of Medical Registration and Examination is trying to raise the standard whereby physicians are granted licenses in that state. That there is a crying need for this movement is evidenced by the following letter received by the Board from a would-be practitioner in a remote county:

"Dear Sir—Excuse me for being fooled by Professional Men. Tis surely my understanding that is a Diploma of just what it says. I have my tickets and other evidents of my work. Now

I paid and worked hard for that Diploma. I had work in all that is mentioned in that Diploma. Is the signature good to that Diploma. Will you please answere the above question. I only intended that for a Certificate of Obstetrics and I see in the Law that Obstetrical Diplomas are taking. I thought the application blank was hardly right. If you can give me a certificate for what that calls for send me a proper blank to fill out and return to you. The $5 I sent was correct with an Obstetrical Diploma. Now if you can't do nothing I have ask send my money and Diploma back and a application blank for Examination in January, The 2 Tuesday. The reason I am delaid in answering yours, etc."

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., August 1 to 7, 1900, inclusive:

William H. Arthur, major and surgeon, U. S. A., relieved from duty in San Francisco, Cal., to proceed to Taku, China, and report to Major-General Chaffee for assignment.

Robert E. Caldwell, acting asst.-surgeon, now at San Francisco, Cal., to report for assignment to the transport *Kosecrans*.

Henry R. Carter, jr., acting asst.-surgeon, now at Vancouver Barracks, Wash., to temporary duty at that post.

Edward T. Comegys, major and surgeon, U. S. A., former orders revoked, to proceed without delay to San Francisco, Cal., and report to the surgeon-general by telegraph for further instructions.

James J. Edmondson, acting asst.-surgeon, from Fort Du Pont, Del., to San Francisco, Cal., for assignment to duty with troops destined for foreign service.

Robert J. Gibson, major and surgeon, U. S. A., relieved from further temporary duty at San Francisco, Cal., and will report for assignment as attending surgeon and medical superintendent of the army transport service in that city.

J. Randolph Harmer, acting asst.-surgeon, from Opelika, Ala., to Washington, D. C., to report to the surgeon-general for instructions.

James J. Holloway, acting asst.-surgeon, from the transport *Roscrans*, to the transport *Sheridan*.

Vernon J. Hooper, acting asst.-surgeon, from duty on the transport *Sedgwick* to San Francisco, Cal., for duty with troops destined for foreign service.

Francis J. Ives, major and surgeon, Vols., from New York City to San Francisco, Cal., for duty with troops en route to China.

James G. McKay, acting asst.-surgeon, from duty in the Division of Cuba, to report, on expiration of present leave of absence, at Fort Sheridan, Ill., to accompany the 5th Infantry, under orders for foreign service.

Charles B. Mittelstaedt, acting asst.-surgeon, from New York City to San Francisco, Cal., to accompany troops en route to China.

Robert M. O'Reilly, lieutenant-colonel, deputy surgeon-general, U. S. A., relieved from the command of the Josiah Simpson General Hospital, Fort Monroe, Va., and will turn over the quartermaster's property, for which he is responsible, to Major William J. White, quartermaster, Vols., and dispose of the property of the medical department under instructions from the surgeon-general.

Ernest C. Schultze, acting asst.-surgeon, from New York City to San Francisco, Cal., to accompany troops en route to China.

George K. Sims, acting asst.-surgeon, relieved from duty in the Department of California for assignment with troops en route to the Philippine Islands.

George H. Torney, major and surgeon, U. S. A., to proceed to Battle Creek, Mich., and Richfield Springs, N. Y., on official business and to return to his proper station.

J. P. Truax, acting asst.-surgeon, leave of absence granted.

Benjamin F. VanMeter, acting asst.-surgeon, leave of absence granted.

Robert H. Zauner, acting asst.-surgeon, from Washington, D. C., to post duty at Fort Du Pont, Del.

The following acting assistant-surgeons have been directed to proceed from the place set opposite their respective names to San Francisco, Cal., to accompany troops destined for foreign service: William P. Baker, Guthrie, Okla.; Lewis F. Bleasehy, Detroit, Mich.; Frederick A. Dale, Lemont, Pa.; James F. Edwards, Slate Lick, Pa.; Graham E. Henson, St. Clair, Mich.; James F. Kemp, Washington, D. C.; James Kenan, New York City; Alvis B. Kennedy, Bonham, Tex.; Harry D. Kneedler, St. Louis, Mo.; William E. Lower, Cleveland, Ohio; Patrick McGrath, Washington, D. C.; David W. Overton, New York City; Louis W. Pease, Saginaw, Mich.; Harper Peddicord, Baltimore, Md.; Thornton W. Perkins, Catonsville, Md.; Joseph Pinquard, Vinita, Ind. Ter.; Ernest F. Slater, New York City; James W. Thornton, Ayrshire, Iowa; Gideon M. Van Poole, Salisbury, N. C.; George B. Wallace, Ann Arbor, Mich.; Francis M. Wells, Charlestown, Ind.; W. Turner Woolton, Catonsville, Md.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Aug. 11, 1900:

Asst.-Surgeon C. A. Crawford, detached from the *Eagle* and ordered to the *Chesapeake*.

Asst.-Surgeon C. H. Delancy, detached from the *Constellation*, August 13, and ordered to the *Bancroft*.

P. A. Surgeon W. C. Braisted, detached from the *Massachusetts* and ordered to the *Topeka*.

Asst.-Surgeon W. M. Garton, detached from the *New York* and ordered to temporary duty on the *Massachusetts*.

DEATH.

P. A. Surgeon James Stoughton, U. S. N., was drowned at Shanghai, China, August 5, 1900.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital service for the 14 days ending Aug. 9, 1900.

Surgeon J. H. White, to proceed to Mullet Key Detention Camp, Fla., as inspector.

Surgeon L. L. Williams, to proceed to Stapleton, N. Y., as inspector of unserviceable property.

P. A. Surgeon A. C. Smith, leave of absence for eight days granted by bureau letter of June 30, revoked.

P. A. Surgeon H. W. Wickes, Bureau letter of June 26, granting P. A. Surgeon Wickes leave of absence for fifteen days, amended so that said leave shall be for four days only.

P. A. Surgeon J. B. Greene, granted leave of absence for twenty-three days.

Asst.-Surgeon H. S. Mathewson, granted leave of absence for one month from September 5.

Acting Asst.-Surgeon W. S. Walkeley, granted leave of absence for two days.

Hospital Steward L. W. Ryder, granted leave of absence for fifteen days from August 1.

Surgeon Fairfax Irwin, to proceed to Saco, Me., for special temporary duty.

Surgeon H. R. Carter, to report at Washington, D. C., for temporary duty.

Surgeon W. P. McIntosh, detailed as inspector of the Mobile (Ala.) quarantine station.

Surgeon W. G. Stimpson, to proceed to Cairo, Ill., as inspector.

P. A. Surgeon C. H. Gardner, granted extension of leave of absence for nine days.

Acting Asst.-Surgeon B. W., Goldsborough, granted leave of absence for two weeks to be taken during August.

Acting Asst.-Surgeon W. S. Halkley, granted leave of absence for two days.

Hospital Steward J. J. Hurty, relieved from duty at Vineyard Haven, Mass., and directed to proceed to San Juan, Porto Rico, and report to Asst.-Surgeon C. H. Lavinder for duty.

Hospital Steward B. E. Holsendorf, to report at Washington, D. C., for special temporary duty; relieved from duty at San Juan, Porto Rico, and directed to proceed to Havana, Cuba, and report to the chief quarantine officer of Cuba for duty.

CASUALTY.

Acting Asst.-Surgeon Bernardo Escobar, quarantine officer at Caibarien, Cuba, died July 28, 1900.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Aug. 10, 1900:

SMALLPOX—UNITED STATES.

Louisiana: New Orleans, July 28-Aug. 4, 4 cases, 1 death.
Massachusetts: Lowell, July 28-Aug. 4, 5 cases.
Nebraska: Omaha, July 28-Aug. 4, 1 case.
New Hampshire: Manchester, July 28-Aug. 4, 2 cases.
Ohio: Cincinnati, July 27-Aug. 3, 1 case; Cleveland, July 28-Aug. 4, 6 cases, 1 death.
Washington: Tacoma, July 21-28, 1 case.

SMALLPOX—FOREIGN.

Belgium: Antwerp, July 7-21, 4 deaths.
Egypt: Cairo, June 23-30, 1 death.
England: London, July 7-21, 31 cases.
France: Lyons, July 7-14, 1 death.
Gibraltar: July 15-22, 1 case.
India: Bombay, July 3-10, 4 deaths; Calcutta, June 30-July 7, 18 deaths; Karachi, July 1-8, 4 cases, 1 death; Madras, June 30-July 6, 3 deaths.
Mexico: Vera Cruz, July 21-28, 5 deaths.
Russia: Moscow, July 7-14, 8 cases, 3 deaths; Odessa, July 7-21, 8 cases, 4 deaths; Warsaw, July 7-14, 8 deaths.
Scotland: Glasgow, July 19-27, 48 cases, 2 deaths.
Switzerland: Geneva, June 30-July 7, 5 cases.

YELLOW FEVER.

Africa: Goree Dakar, June 16-30, 1 case; Rufisque, June 30, several cases.
Colombia: Barranquilla, July 14-21, 3 cases, 1 death; Bocas del Toro, July 25, 2 cases, 1 death; Cartagena, July 7-14, 3 cases, 3 deaths; Panama, July 23-30, 4 cases.
Cuba: Cardenas, Aug. 3, 1 case suspicious; Matanzas, July 25, 1 death, U. S. Volunteers: Santa Clara, July 24, 1 case.

CHOLERA.

India: Bombay, July 3-10, 175 deaths; Calcutta, June 30-July 7, 37 deaths; Karachi, July 1-8, 1 case, 1 death; Madras, June 23-29, 1 death.

PLAGUE.

Australia: Sydney, July 16-30, 18 cases, 3 deaths.
Egypt: Port Said, April 20-July 9, 90 cases, 36 deaths.
India: Bombay, July 3-10, 60 deaths; Calcutta, June 30-July 7, 71 deaths.
Japan: Formosa-Tamsui, June 14-21, 33 cases, 30 deaths.
Philippines: Cavite, June 16-23, 1 case; Manila, June 16-23, 2 cases.

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